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A Constraint-Based Analysis of Korean Blends

한국어 혼성어의 제약기반 분석

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A Constraint-Based Analysis of Korean Blends

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Abstract

A Constraint-Based Analysis of Korean Blends

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This study addresses the question of what basic principles and constraints govern the blending while focusing on the description and analysis of phonological properties of Korean blends. I first argue that Korean blending is a systematic grammatical word-formation while discussing the observed patterns of my corpus. I will then provide a constraint-based analysis of all these patterns including those which have rarely been observed in the literature.

In the conventional theory of morphology, blending has been considered as a marginal operation which is not a linguistically governed word-formation. However, some recent investigations into blending in a variety of languages (Hebrew (Bat-el 1996), English (Gries 2004a/b, Hong 2004/2005), Spanish (Piñeros 2000/2004), and Japanese (Kubozono 1990)) suggest that many of phonological characteristics of blending in fact show grammatical regularities. For instance, in English, the

segmental composition of a blend (e.g. *brunch*) is always based on both of its source words (e.g. *br(eakfast)* and *(l)unch*) whereas its prosodic properties such as word-length and stress pattern are usually identical, or at least similar, to one of the two source words which is often called 'head' of the blend. Similar phonological characterization holds for blends of other languages including Korean.

Such characteristics of blending have been explained within a constraint-based framework such as Optimality Theory. As shown in *sʌl.len.t^{h}a.in* 'new year's day and Valentine's day are on the same day'(*sʌl* 'new year's day' + (*pa)l.len.t^{h}a.in* 'Valentine'), Korean blends usually preserve the prosody (i.e. syllable count) of the head, while the initial part of the segmental sequence of the blend is from the non-head source word. This general pattern can be explained by adopting (i) prosodic faithfulness constraints for the head (Max-σ(HD)/Dep-σ(HD)) and (ii) segmental faithfulness constraints for both source words (Max-seg(HD/Non-HD)). Generally, prosodic faithfulness overrides segmental faithfulness.

Several interesting exceptional patterns, where segmental faithfulness is preferred to prosodic faithfulness, have been observed. They indicate that drastic violation of segmental faithfulness is avoided although it is generally less important than prosodic faithfulness. This leads me to adopt, for the analysis of Korean blends, Harmonic Grammar (Legendre, Miyata, and Smolensky 1990, Smolensky and Legendre 2006), where constraints are assigned weights. Note that in *to.ne.t^{h}i.cɨn* 'a netizen who donates' (*to.ne.(i.sjʌn)* 'donation'+ *ne.t^{h}i.cɨn* 'netizen'), where the length of the blend,

i.e. four syllables, is longer than that of the head, i.e. three syllables, many input segments may survive in the blend due to the presence of the overlap segments [ne] (the segments from both source words). Also, a similar analysis can be provided for the cases like the one in *t^{h}ɛ.k^{h}o.li.ʌn* 'a mixture of Taekwondo and Korean' (*t^{h}ɛ.k(wʌn.to)* 'Taekwondo, a Korean martial art' + *k^{h}o.li.ʌn* 'Korean language'). What is interesting about this case is that the corresponding segments, /k/ and /k^{h}/ are not completely identical to each other. Finally, *pal.len.c^{h}i.k^{h}in* 'eating chicken on Valentine's day' (*pal.len.(t^{h}a).in* 'Valentine' + *c^{h}i.k^{h}in* 'chicken') shows the overlapping of noncontiguous segments: the initial three syllables of the blend are not contiguous in its corresponding left source word since [t^{h}a] is missing. Note that the presence of noncontiguous overlapping segments [-in] has the effect of maximizing segmental faithfulness.

In conclusion, I show that general and exceptional patterns of Korean blends can be explained by the interaction of linguistically-governed constraints within the framework of HG.

Keywords: Blend, Optimality Theory, Harmonic Grammar, Prosodic Morphology

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1. Introduction

Blending is a word-formation process in which two or more independent words are merged into a new word with the shortening of at least one of the source words, as can be seen in the English blend *brunch (br(eakfast) + (l)unch).* Blends often include a segment shared by the source words, which I will refer to as an 'overlap' segment (marked with an underline): e.g. *mo<u>t</u>el (mo<u>t</u>(or) + (h)o<u>t</u>el).* At least in Korean, blending has recently become a very productive word-formation process that can be easily observed in TV shows or on the Internet. People usually make blends for fun, and many examples are spontaneous although only a small number of them remain in the language. In the conventional theory of morphology (Dressler 2000, Bauer 2006 among others), blending has been considered a marginal operation, which is not a linguistically governed word-formation. However, some recent investigations into blending in a variety of languages suggest that many of its core features are in fact linguistically significant and possibly a part of speakers' mental grammar. Among other linguistic factors, phonology plays an important role in creating the blend as shown in previous studies on blends in languages such as Hebrew (Bat-el 1996), English (Gries 2004a/b, Hong 2004/2005), Spanish (Piñeros 2000/2004), and Japanese (Kubozono 1990).[1] For instance, in English, the segmental composition of a

[1] Typical examples of blends in these languages include the following:
(i) Hebrew: *kmoyonéz* ' mayonnaise substitute' = *kmó* 'alike' + *mayonéz* 'mayonnaise'
(ii) English: *alphameric* 'consisting of both letters and numbers'= *alphabetic* + *numeric*.
(iii) Spanish: *pánsáklos* 'potbellied Santa Clause' = *pánsa* 'belly' + *sàntaklós* 'Santa

blend (e.g. *brunch*) is always based on both of its source words (e.g. *br(eakfast)* and *(l)unch*) whereas its prosodic properties such as word-length and stress pattern are usually identical, or at least similar, to only one of the two source words which is often called the 'head' of the blend (Gries 2004b, Bat-el 2006). As will be shown below, similar phonological characterizations hold for blends in other languages including Korean.

The aim of this study is twofold. Firstly, I collect Korean blends from various sources and try to give a phonological description for them. By doing so, I show that Korean blends reveal certain tendencies in their formation. Secondly, as I show that Korean blends are in fact very grammatical, I provide a phonological analysis of Korean blends. In other words, the present study addresses the question of what basic principles and constraints govern blending while focusing on the description and analysis of the phonological properties of Korean blends.

I consider 'recoverability' as the main motivation for the phonological patterns in blends (cf. Piñeros 2004). For the understanding of the intended meaning of a blend, both of its source words need to be recovered effectively by language users (Lehrer 1996, Piñeros 2004, Bat-el 2006). Recoverability of the source words must be high when their similarity to the blend is high. This leads to the assumption that the phonological characteristics of the blends mentioned above (i.e., segmental dependence on the source words and prosodic dependence on the head) are adopted to

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Clause'

(iv) Japanese: *yonhuruenza* 'Bae Yong-Jun is so famous that his popularity spread like influenza' = *yonsama* 'Bae Yong-Jun, the famous Korean actor' + *inhuruenza* 'influenza'

enhance the similarity between the blend and its source words, and thus the recoverability as well. To put it differently, blending is a process of keeping the surface forms of the source words and the blend as similar as possible (Bat-el 1996, Hong 2005). Prosodic morphological processes, such as truncation and reduplication, show similar characteristics, and they have, in fact, been analyzed in terms of correspondence constraints requiring identity between the derived and base words within the framework of Optimality Theory (Prince and Smolensky 1993/2004, McCarthy and Prince 1995). In the present study, I will show that Korean blends can be analyzed with the same types of constraints, but the resolution of conflicting constraints is not always subject to the strict domination principle of Optimality Theory. It will be argued that Harmonic Grammar (Legendre, Miyata, and Smolensky 1990, Smolensky and Legendre 2006), where constraints are assigned weights, not rankings, is a better model for the analysis of Korean blends, and possibly for blends of any other language.

The remainder of this paper is organized as follows. Section 2 discusses the characteristics of Korean blends. In doing so, I will emphasize the role of phonological similarity in the formation of a blend. Section 3 provides a phonological theoretic analysis within the frameworks of Optimality Theory and Harmonic Grammar. Section 4 discusses residual cases. Section 5 offers a conclusion and some directions for future study.

2. Characteristic Patterns of Korean blends

Korean blends have not been studied much in any field of linguistics. Only a few studies have examined their morphological (Hwang 2009, Noh 2010) and semantic properties (Im 1996), but not their phonological ones. This section provides a detailed discussion of statistical patterns of Korean blends, focusing on their phonological properties.

My data sources include previous studies on Korean blends (Nam 1967, Lee 1983, Im 1996, Park 2007, Hwang 2009), the Dictionary of neologisms in Korean (2007), the open dictionary on 'www.naver.com', the most popular website portal in Korea, and other media outlets, such as the Internet and television shows. Some were also collected via personal contact.

As formation of blends in Korean appears to have become active only recently, one might argue that they are merely a temporary trend. However, the point of interest here is not how long the trend will continue, but rather the fact that even seemingly random blends display a certain pattern. From the initial database of 760 words, 420 were chosen as an appropriate set of Korean blends for the present research.[2]

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[2] The following words were excluded from the final database adopted for analysis.

a. Direct loans from English: 185 tokens, e.g. *murse (man+nurse)*.
Many Korean blends consist of two loanwords, and some instances of blends from previous studies were actually blends that were not created by Korean speakers. For blends that consisted solely of loaned source words, I excluded them from my list of Korean blends if a Google search revealed that they appear in a foreign website.
b. Contiguous categories: 114 tokens
Bat-el and Cohen (forthcoming) defined blends as belonging to a larger class of abbreviations,

Provided below is the phoneme inventory of Korean. Examples throughout this paper are transcribed with the phonetic symbols shown below.

(1) Phoneme inventory of Korean

a. Consonants

		labial	alveolar	palatal	velar	labio-velar	glottal
Stop	Lenis Tense Aspirated	p p’ p^h	t t’ t^h		k k’ k^h		
Affricate	Lenis Tense Aspirated			c ɕ’ c^h			
Fricative	Lenis Tense		s s’				h
Nasal		m	n		ŋ		
Glide				j		w	
Liquid			l				

b. Vowels

	front	central	back
high	i	ɨ	u
mid	e/ɛ		o/ʌ
low			a

Also, in order to highlight the crucial areas in blend formation, overlapping segments are underlined, and truncated segments are parenthesized: e.g. *mo<u>te</u>l=m<u>ot</u>(or)+(h)<u>ot</u>el*.

Before moving on, provided below is the statistical distribution of blends in terms of the etymology of source words that constitute the blends. As shown below, Korean

such as clipped-compounds (sci-fi = Science Fiction). Clipped-compounds show somewhat different characteristics from blends, and thus I excluded any data that could potentially be categorized as clipped compounds.

blends can be divided into three types: Korean + Korean, Korean + loanword (loanword + Korean), and loanword + loanword.

(2) Etymology of Korean blends

Etymology	Count	Examples
Korean + Korean	106 (25.24%)	a .*muc^{h}u* = *mu* + (*pɛ*)*c^{h}u* 'a mixture of a radish and a cabbage' 'radish' 'cabbage'
Korean + Loanword (loanword+Korean)	161 (38.33%)	b.*p^{h}ok^{h}arak* = *p^{h}ok^{h}(ɨ)* + (*sutk)arak* 'a mixture of fork and spoon' 'fork' 'spoon'
Loanword+ Loanword	153 (36.43%)	c.*k^{h}oliutɨ* = *k^{h}oli(a)* + (*hal)liutɨ* 'Korean film society' 'Korea' 'Hollywood'
	420	

Most of the blends are rather new, and it is likely that more loanwords will be used in new coinages given that loanwords are increasingly popular in Korea. Furthermore, Korean speakers are not highly aware of their use of loanwards (Hwang 2010), and native Korean words and loanwords are combined freely. It also appears that loanword phonology has little effect on the formation of blends, and thus, while interesting, the classification of blends based on the etymology of source words will largely be ignored in this study. The few exceptional cases that may be due to loanword phonology will be mentioned briefly in section 2.3, and an interesting case in lexical selection will be introduced in section 4.1.

The following subsections discuss the phonological patterns of Korean blends. Subsection 2.1 covers combining patterns of source words, and subsection 2.2

discusses word order, i.e. the precedence relation of the parts of the blend. Subsection 2.3 discusses the switch point where the two source words meet to form a blend. Subsections 2.4 and 2.5 examine the prosodic structure of blends and the overlapping of the source words, respectively. Subsection 2.6 provides the generalized patterns for Korean blends.

2.1 Combining patterns

This section discusses how two source words 'blend' into one word. Blends generally take the initial part of the left source word and the final part of the right source word, such as *kalicinal* 'the one that is not original' *(ka(c'a)* 'fake' + (*o)licinal* 'original'). *ka* is from the first word, and *licinal* is from the second word. The initial part of the left source word becomes the initial part of the resultant blend whereas the final part of the right source word becomes the end of the resultant blend. This linear combination pattern is quite common in blends of all languages (Kubozono 1990, Bat-el 1996, Pinĕros 2004, Hong 2004/2005).

The majority of Korean blends can be classified according to the following criteria: (i) the presence or absence of overlapping segments at the switch point (a boundary of two source words where the first source word ends and the second source word starts) and (ii) the truncation of source words (cf. Algeo 1977, Lehrer 1996, Hong 2005). In other words, whether source words undergo clipping or not.

The first criterion regarding the presence or absence of overlap at the switch point

is important because the presence of overlap segments can maximize the number of segments from source words in the resultant blend. Again, *brunch* is a blend without overlap, whereas *motel* is a blend with the overlapping segments *ot* from both source words. In the case of truncation, it can occur in either one of the source words, or in both. *Brunch* and *motel* show truncation of both source words, whereas *steelionaire (steel+(mi)llionaire)* shows the truncation of only one source word, namely (*mi)llionaire*. The untruncated part of the source word (e.g. *br* in *br(unch)*), which are in general not an independent morpheme (Lehrer 1996), will be called a 'splinter'. In Korean, there are seven combining patterns, as illustrated in table (3).

(3) Types of Combining Patterns

Overlap	Truncation		Count	Examples
Present (162, 38.6%)	a	whole+ whole	4	*mesin* = *mesi* + *sin* 'Messi as a god' 'Messi, a soccer player' 'god'
	b	whole+ splinter	68	*taksekwʌn* = *tak* + (*jʌ*)*ksekwʌn* 'a sphere where cheap chicken is sold' 'chicken' 'subway station sphere'
	c	splinter+ whole	5	*lecʌnsʌl* = *lecʌn(tɨ)* + *cʌnsʌl* 'a really powerful legend' 'legend in English loanword' 'legend in Korean'
	d	splinter+ splinter	85	*k^holiutɨ* = *k^holi(a)* + (*hal)liutɨ* 'Korean film society' 'Korea' 'Hollywood'
Absent (258, 61.4%)	e	whole+ splinter	105	*muc^{h}u* = *mu* + (*pɛ)c^{h}u* 'a mixture of a radish and a cabbage' 'radish' 'cabbage'
	f	splinter+ whole	4	*nɛŋc^{h}aŋko* = *nɛŋ(caŋko)* + *c^{h}aŋko* 'a mixture of a refrigerator and storage' 'refrigerator' 'storage'
	g	splinter+ splinter	149	*kalicinal* = *ka(c'a)* + (*o)licinal* 'the one is not original' 'fake' 'original'
Total			420	

As can be seen in table (3), the majority of blends (258 blends, 61.4%) have no overlapping segments at the switch point. Nevertheless, a substantial number of blends with overlapping segments (153 blends, 38.6%) are still attested. The 'whole+whole' pattern in (3a) is rare. Note that if every segment of both source words survives, it would be no different from compounding. What distinguishes blends from compounds, however, is that they contain overlapping segments.

Also, only nine blends (five with, and four without overlap) with truncation of only the left word (splinter + whole) are attested. On the other hand, blends with truncation of only the right word (whole + splinter) are quite common (68 blends with, and 105 blends without overlap). Blends with truncation of only the right word are similar to suffixation in some way, if we consider the splinter of the right source word as a suffix. In fact, there are many splinters that are used recurrently, such as *-holic* from *alcoholic* in English. The most famous case of this in Korean is *-t^{h}iŋ* 'kind of meeting between opposite sexes' from *mit^{h}iŋ* 'a meeting' (Ahn 2007).

The 'splinter+splinter' pattern with truncation of both source words is the most common. Korean blends undergo truncation on the right side most of the time, whether there is an overlapping segment or not. Only 13 blends are attested without truncation on the right side (four 'whole+whole' blends, nine 'splinter+whole' blends). These statistical tendencies imply that Korean blends have some patterns that could be generalized.

In sum, while Korean blends show seven combining patterns, these patterns are not equally attested. The majority of blends are 'whole+splinter' and

‘splinter+splinter’ types. This means that most of the time, the right source word is truncated (3b, d, g, e). These tendencies will be discussed in-depth in section 2.4, with respect to the length of the blend.

2.2 Word Order

When two source words are combined to form a blend, their order is determined by both phonological and semantic factors. With respect to semantic interpretation, Korean blends are similar to Korean compounds in that the semantic relation of two source words can be either endocentric or exocentric. The main difference between endocentric and exocentric relations is the existence of a semantic head. To put it simply, if one of the words works as a modifier and the other as a semantic head, the relation is endocentric. On the other hand, if there is no semantic head, it is exocentric. In the case of Korean, semantic heads occupy the right side, which plays an important role in determining the word order of a blend.

Semantic relation affects the order of source words in blending in all languages previously studied, and the same holds for Korean. For example, in English, in an endocentric blend, one of its source words functions as the semantic head and the other as a modifier, such as in *motel* (*mot(or) + (h)otel*), where *motel* is a kind of *hotel,* and thus *hotel* is the head whereas *motor* is the modifier. In endocentric blends, the semantic head goes to the right side, just as the semantic head of a compound occupies the right side. In the exocentric blends both source words have the same semantic status, thus no semantic head exists, such as in *smog* (*smo(ke) + (f)og*)

(Kubozono 1990, Dressler 2000, Bauer 2006).

According to my classification of the present corpus, endocentric blends are much more common than exocentric ones as shown in table (4).

(4) Semantic relations of Korean blends

Semantic relation	Count	Examples	
Exocentric	59 (14%)	a	*p^{h}ok^{h}arak* = *p^{h}ok^{h}(ɨ)* + *(sut)karak* 'a mixture of a fork and a spoon' 'a fork' 'a spoon'
Endocentric	361 (86%)	b	*camp^{h}ociʌm* = *cam* + *(si)mp^{h}ociʌm* 'a symposium that is really boring' 'a sleep' 'a symposium'
Total	420		

Among 420 blends, 361 blends are endocentric, and it is the semantic relationship that determines the order of the two source words. As with compounds, the semantic head always goes to the right hand side in Korean blends. In (4a) *simp^{h}ociʌm* goes to the right side because *camp^{h}ociʌm* refers to a kind of symposium, and thus *simp^{h}ociʌm* is the semantic head of the blend, whereas *cam* works as a modifier. On the other hand, 59 blends are exocentric, usually being composed of two source words that can occupy the same syntactic slot. For example, in the sentence 'I ate dinner with a _____,' both *p^{h}ok^{h}ɨ* and *sutkarak* can occupy the object position. There is no semantic head in this relation, and the two source words do not have a predetermined order when combining with each other.

While the word order of the endocentric blends is predetermined by semantic factors, the order in exocentric blends is more complicated. Bat-el argues that in English blends, when two source words of a blend are in an exocentric relation, their orderings may be determined in terms of their phonological factors (Bat-el 2006). Word order of Korean exocentric blends is also determined by phonological factors, as supported by cases like *pʰokʰarak* in (4a). Consider the English blend *spork (sp(oon) + (f)ork)*. The blend contains similar source words as in the Korean blend, but the word order is different. Kelly (1998) argues that *spoon* comes first in English because of the prototypicality that a spoon has compared to a fork. Similarly, in Korea, *sutkarak* 'a spoon' is more typical and frequently used than *pʰokʰi* 'a fork', as it is not a traditional Korean eating utensil. Unlike in the English blend, however, the Korean blend *pʰokʰarak* shows the opposite word order, where *sutkarak* 'a spoon' does not come first but is responsible for the right side instead. Therefore, Kelly's view cannot explain the case of Korean. The question then, is what drives the different orders in the two languages? The answer can be found in phonology. *Sutkarak* is longer than *pʰokʰi*, and in the case of exocentric blends in which neither source word can be the semantic head by definition, the longer word usually goes to the right side, becoming the head of the blend. This is also the case in other languages, such as Japanese or English (Kubozono 1990, Bat-el 2006).

While it is generally the case that the word order of endocentric blends is largely determined by semantic factors while exocentric blends are determined by phonological factors, there is an exceptional case that shows that phonology is

sometimes more powerful than the semantic relation as shown in (5). The word ordering in blends, therefore, is more flexible in some ways compared to compounds.

(5) An exceptional case of word order

kempis'i = *ke.(im)* + *empis'i*

'a nickname of the channel for the game made by MBC (original name is "MBC game net")' 'game' 'MBC, the Korean broadcasting'

The full name of the TV channel is 'MBC game net,' but people generally prefer to call it *kempis'i*, a blend formed due to the phonological similarity of *ke.(im)* and the first syllable of *empis'i*. What makes this case exceptional is that even though the word order of the two source words is already determined by the full name of the channel, the actual order is reversed in the blend due to phonological factors. This shows that sometimes phonological similarity can override semantic relations in determining word order, supporting the view that phonology in blending is important.

In some cases, it is difficult to determine the semantic relation between the source words. Take the case of *smog*, for example. The blend has two meanings, 'the mixture of smoke and fog (exocentric)' and 'an airborne pollution (endocentric)'. Likewise, the semantic relations in compounding can also be ambiguous (Bat-el 2006). Perhaps unsurprisingly, blends with source words that have semantically ambiguous relations can also be found in Korean. As mentioned earlier, the word order rule is apparent when only blends with clear categories are considered. If the relation is endocentric, the head goes to the right side, and if it is exocentric, phonology determines the order.

The word order in unclear cases is also rather straightforward, since head-like words are generally the longer of the two source words and occupy the right side. Thus, determining whether the ambiguous cases are exo- or endocentric do not significantly affect the tendencies I discussed above.

To sum up, in endocentric blends, the right side of a blend is occupied by its semantic head, and in exocentric blends, by the longer source word. While most cases follow this pattern, phonological similarity can sometimes determine the word order for blends in Korean. The semantic head of endocentric blends and the longer source word of exocentric blends will be referred to as the 'phonological head' for the remainder of this study.

2.3 Switch Point

This section focuses on switch points, where the left source word ends and the right source word starts in a blend. When the two source words have a shared segment (or overlap), the switch point is that segment (e.g. *tak*sekwʌn 'a sphere where a cheap chicken is sold' = *tak* 'chicken' + (*jʌ*)*k*sekwʌn 'subway station sphere,' *k* is the switch point).

Let us now consider the switch point of blends that have no overlapping segments. My corpus shows a preference for having the switch point at syllable boundaries as can be seen in (6).

(6) Switch point of blends without overlap

Switch Point		Count	Examples
Syllable Boundary	a	247	*. o.cik^{h}ʌl* = *o.(p^{h}ela)* + *(mju)cik^{h}ʌl* 'a mixture of opera and a musical' 'opera' 'musical'
Onset Split C/V(C)	b	6	*jo.ko.ne.cɨ* = *jo.k(u.lɨ.t^{h}ɨ)* + *(ma.j)o.ne.cɨ* 'a mixture of yogurt and mayonnaise' 'yogurt' 'mayonnaise'
Others	c	5	*c^{h}ik.t^{h}oŋ.ljʌŋ* = *c^{h}i.k^{h}(in)* + *(tɛ.)t^{h}oŋ.ljʌŋ* 'president of chicken' 'chicken' 'president'
		258	

The majority of blends (247 blends) have the switch point at a syllable boundary. If the left source word finishes at a syllable boundary, the right source word also starts at a syllable boundary, as in (6a). While this rule is true in most cases, five blends show an onset-peak split; in other words, the left source word finishes at the onset position, and the right source word starts at the syllable peak position (always a vowel in Korean), as in (6b). Kubozono (1990) studies English and Japanese blends and argues that the blended items switch in the same syllable position, such that if one word is split in a given syllable position, the other word is split in the same position.[3] Likewise, the types like (6a) and (6b) show that if the first source word ends at a syllable boundary or at a certain position within the syllable, the second source word picks up at the same position in Korean.

On the other hand, cases like those in (6c) do not switch in the expected syllable

[3] Kubozono (1990) argues that the switch point in English is the onset-peak or syllable boundary, whereas Japanese speakers prefer mora boundaries.

position. Rather, *k*, the onset of the second syllable of *c*^{h}*ik*^{h}*in* corresponds to the coda of the first syllable of the blend, *c*^{h}*ik*. One possible explanation is that for recoverability, more segments were preserved by resyllabifying the onset of the second syllable as the coda of the first syllable, a position that was originally empty.[4]

The question, then, is why blends like *ocik*^{h}*ʌl* in (6a) is not *opcik*^{h}*ʌl*, preserving the syllable structure of the source word rather than maximizing the segments of the source word.[5] While there is no clear answer to this issue at this point, the fact that an overwhelming number of blends have their switch points at syllable boundaries, there at least seems to be a preference for the preservation of the syllable structure of source words to maximization of segments. However, the exceptional cases like those in (6c) are worth investigating, and further studies are required to understand this type of blends.

In summary, the switch point of Korean blends tends to be at a syllable boundary. A few cases show within-syllable switching, but the switch still occurs at the same position within the syllable. Truly exceptional cases in which an onset consonant in a source word survives as a coda in the blend also exist, but they are quite rare.

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[4] This pattern is often found with word formations that involve English loanwords. In clipped compounds – another word-formation pattern in Korean in which compounds are clipped down to two-syllable words – Korean speakers try to retain as many segments as possible by utilizing the originally empty coda position, as in *c*^{h}*ulsək* 'attendance'+*c*^{h}*ek*^{h}*ɨ* 'check' = *c*^{h}*ulc*^{h}*ek*, instead of *c*^{h}*ulc*^{h}*e_*.

[5] Hyesun Cho (p.c.) pointed out that if the blend were *opcik*^{h}*ʌl*, the onset-to-coda resyllabification would result in an undesirable side-effect – post-obstruent tensing of lax consonants – which would make the *c* surface as *c'*. However, *c*^{h}*ikt*^{h}*oŋljʌŋ* is fine in this regard, and thus a further study with more data is in order.

2.4 Length of the blend

Length is an important factor for the description of Korean blends. The length of a blend is often the same as that of one of its source words. Preserving the same length form is a crucial part of enhancing the similarity between the source word and the blend. There are general patterns that determine the length, and deviations from the general patterns could be explained as intentional in order to facilitate perception of a blend's intended meaning. Subsection 2.4.1 discusses which factors determine the length of blends and provides an explanation for the general patterns. Subsection 2.4.2 looks at exceptional patterns and provides a more in-depth explanation of the concept of 'recoverability'.

2.4.1 General patterns

When discussing the length of words, the same length means two words have the same number of syllables. The following statistics on the length of the blends in the corpus and their source words show how the length of blends is determined. There are two factors at play: (i) between two source words, which source word determines the length of the blend, and (ii) which of the two source words is longer:

(7) Which source word determines the length of the blend? (SW=Source Word)

Blend =Left SW	Blend =Right SW	Left SW = Blend = Right SW	Other	Total
14 (3.3%)	313 (74.5%)	65 (15.5%)	28 (6.7%)	420

Table (7) shows that approximately 77.8% (3.3%+74.5%) of blends have the same length as at least one of two source words, and there is a tendency for blends to follow the length of the right source word (74.5%).

(8) Which source word is longer?

Left >Right	Left<Right	Left=Right	Total
46 (11%)	298 (70.9%)	76 (18.1%)	420

As shown in Table (8), most of the time (298 blends), the right source word of a blend is longer than its corresponding left source word. In his research on English blends, Kubozono (1990) concludes that a longer word tends to occupy the right hand side. A similar observation is made in my corpus of Korean blends as well, where a longer word tends to occupy the right side.

Based on the two statistical tendencies, it can be concluded that the right source word is generally longer and determines the length of the blend. To put it differently, since the right source word, which determines the length of the whole blend is longer, more segments could be preserved from each source word compared to when the shorter source word determines the length of the blend.

An interesting finding is that in the case of endocentric blends, the right source word is usually the semantic head and at the same time, the longer word. This cannot be coincidental since it holds for many cases. One possible explanation is that as blending is intentional word-formation, Korean speakers tend to make a blend when the word on the right is longer, and less inclined to make blends when this condition

is not satisfied. Then what is the advantage of making a blend with the longer source word on the right? With the right source word being longer, the right word determines the length of the blend, whereas the left source word occupies the initial part of the blend, which is a position that is usually considered psycholinguistically prominent (Beckman 1997). Thus when one determines the length of the blend, and the other occupies the initial segmental material, it yields better recoverability for both source words. With the example of *camp^{h}ociʌm*, *cam* occupies the initial position that is prominent and *(si)mp^{h}ociʌm* determines the length.

The following is a breakdown of the relation between source words and blends in terms of their length.

(9) Length comparison of the blend and the source words (SW=Source Word)

Which SW is..?		**Endocentric**		**Exocentric**	
longer	same as blend	#	Examples	#	Examples
Left	Right	24	a. *halpa* = *ha(nnarataŋ)* + *alpa* people who are 'Korean 'part-time job' being paid political party' to write positive opinions about *hannarataŋ*'	0	
	Left	6	b. *kʰipoto* = *kʰipot(ɨ)* + *to* 'The martial art 'Keyboard' 'The way of the Keyboard' to do a martial art'	7	c.*nɛŋcʰaŋko* = *nɛŋ(caŋko)+cʰaŋko* 'mixture of 'refrigerator' 'storage' refrigerator and storage'
	Neither	7	d. *tonetʰicɨn* = *tone(isjʌn)* +*netʰicɨn* 'a netizen 'donation' 'netizen' who donates'	2	e.*pʰeisɨpʰek* = *pʰeisɨ* + *sɨpʰek* 'a face (appearance) 'face' 'ability' works as one's ability'
Right	Right	256	f. *campʰociʌm*= *cam*+(*si*)*mpʰoci.ʌm* 'a symposium 'a sleep' 'symposium' that is really boring'	33	g. *kɛkɨunsʌ*= *kɛkɨ(mɛn)* +(*ana*).*unsʌ* 'one who is 'comedian' 'announcer' both a comedian and an announcer'
	Left	0		1	h. *tʰɛllʌnsʌ*= *tʰɛllʌn(tʰɨ)*+(*ana.u*)*nsʌ* 'one who is 'actor' 'announcer' both an actor and an announcer'
	Neither	7	i.*la.i.tʰicɨn* = *la.i.tʰɨ* + *netʰicɨn* 'a netizen 'the right-wing' 'netizen' who favors the right-wing'	1	j. *matʌntʰɨ* = *matʌ* + (*sɨtʰju*)*tʌntʰɨ* 'one who is 'mother' 'student' both a mother and a student'
Left= Right	Left/ Right	53	k. *jokonecɨ* = *jok(ulɨtʰɨ)* + (*ma*)*jonecɨ* 'a mixture of 'yogurt' 'mayonnaise' yogurt and mayonnaise'	12	l. *ocikʌl* = *o(pʰela)* + (*mju*)*cikʰʌl* 'a mixture of 'opera' 'musical' opera and a musical'
	Neither	8	m.*sɨmasjumʌ* = *sɨma(tʰɨ)*+(*kʰʌn*)*sjumʌ* 'a smart consumer' 'smart' 'consumer'	3	n. *tʰɛkʰoliʌn* = *tʰɛ(kwʌnto)*+ (*kʰo*)*liʌn* 'a mixture of 'Taewkondo, 'Korean Taekwondo a Korean language' and Korean' martial art'

The most frequent type in my corpus involves endocentric blends that are identical in length (measured in terms of syllable count) to the right source word, i.e. the semantic/phonological head of the blends. Most of them (256 endocentric blends and 33 exocentric blends) have longer right source words compared to the left ones as

in (9f) and (9g). 24 of them have shorter right source words as in (9a), but they are still identical in length to the right source words, which are the semantic heads.

Consequently, in most cases, the right source word, i.e. the semantic head of the blend, determines the length of the blend, even if the right source word is shorter. For exocentric blends where there is no head, like in (9g), since the longer word goes to the right side of the blend, we can assume that the longer source word is the phonological head and determines the length of the blend.

2.4.2 Exceptional patterns

In the previous subsection, I have discussed the general length patterns of Korean blends. In this section I will deal with some exceptional patterns. Most cases can be understood under the concept of 'recoverability,' meaning, their deviation from the general pattern for length determination is for perceptual reasons. Lehrer (1996) provides an experimental investigation of what factors affect the identification of source words from the listeners' perspective. Piñeros (2004) adopts the concept of 'recoverability' to explain Spanish portmanteaus that do not follow the prosodic structure of the head. In this section, I try to give possible explanations for the exceptional patterns in Korean based on the intention of the coiner of the blend to make the meaning of the blend more explicit. Exceptional cases involve blends that are identical in length to the left source word (9b, c, h) and those that are identical to neither of the source words (9d, e, i, j, m, n). Let us consider these cases.

The presence of exceptional blends that follow the length of the left source word

in (9b) *kʰipoto* = *kʰipot(ɨ)* + *to* can be understood if we consider the fact that the length of *to*, i.e. one syllable, is too short to be the length of the blend. The blend would be *kʰo* if the length of the head were to be preserved, resulting in almost no recoverability for both source words. In contrast, in the actual blend, *kʰipoto,* the overlapping segment *t* occurs at the switch point, which leads to the preservation of more segments from both source words. The case of (9c) *nɛŋcʰaŋko* is one in which many identical segments from both source words could be preserved with the order. Strictly speaking, there is no overlapping segment at the switch point, as *c* from *nɛŋcaŋko* and *cʰ* from *cʰaŋko* are not identical. The remaining parts *aŋko* are shared by the two source words, however. This order maximizes the recoverability of both source words, compared to *cʰaŋcaŋko,* a potential candidate blend in which the longer source word occupies the right hand position. It is clear that (9h) *tʰɛllʌnsʌ* = *tʰɛllʌn(tʰɨ)* + (*ana.u)nsʌ* may be similarly explained due to the overlapping segment *n* from both source words. Overlapping segments will be discussed further in the following section.

In (9d, e, i, j, m, n), heads do not determine the length of the blend; instead, an additional syllable is added for each blend. In this arrangement, many segments from each source word can be preserved in the resulting blends. For example, in (9i) *la.i.tʰicɨn* = *la.i.tʰɨ* + *netʰicɨn,* one additional syllable has been added to the blend whose head consists of three syllables, but the trade-off is that as a result, *i.tʰ* from the left source word is preserved in the blend. Instead of being faithful to the length of the

head, this blend has chosen to maximize the segmental material from the source words. This is possible because *la.i.tʰɨ* and *nɛtʰicɨn* have the overlapping segment *tʰ*. This example shows that the faithfulness requirement for the length of the head can be violated to enhance the recoverability of the source words' segmental material.

The case of (9m) *sɨmasjumʌ=sɨma(tʰɨ)* + (*kʰʌn)sjumʌ* is difficult to explain because there is no overlap segment between the two source words, unlike in (9i). Without an overlapping segment, not many segments could survive even if one syllable is added to the blend. However, the present arrangement was an unavoidable choice because if it had only the left *sɨ* instead of *sɨma*, it would be hard to recover *sɨmatʰɨ*. There is another example with the same semantic head *kʰʌnsjumʌ* in the corpus, *sɨpʰosjumʌ*, and also in this case, it is not *sɨsjumʌ*. These examples suggest that the requirement to match the length of the head can be violated for the sake of recoverability.

Strictly speaking, there is no overlapping segment in the blend *tʰɛkʰoliʌn* (*tʰɛ(kwʌnto)+ kʰoliʌn*) shown in (9n). But given that the medial /k/ of the left source word is very similar to the medial /kʰ/ of the blend, it can be considered as an overlap segment with an imperfect mapping of /k/ and /kʰ/. The only difference is the presence versus absence of aspiration. This example will be discussed in the next section.

To sum up, a blend has the length of its head, facilitating identification of the head word. It could be compared with the prosodic structure preservation of blends from

other languages. In English and Spanish, prosodic structure is typically represented with the syllable and stress. In Korean, which has no stress, at least of the type attested in the above languages, the prosodic correspondence between the blend and its head word is achieved in terms of syllable count. Thus, a majority of blends consist of the same number of syllables as their head words. There are cases in which blends and their heads do not have the same number of syllables. Most of such exceptional blends have an overlap at the switch point while having more syllables than their head words. Thus, it seems that segmental faithfulness is maximized in these blends, although the prosodic correspondence is sacrificed. This could be understood under the concept of 'recoverability.'

2.5 Overlap

As shown in the previous section, the length of a blend sometimes exceeds that of its head, in order to accommodate a sufficient number of segments of its source words for their recoverability. Notice that the presence of overlapping segments in a blend can have an effect of maximizing the number of segments of its source words, as can be seen in the following example:

(10) The example of the blend with overlapping

hoŋali	=	*hoŋbo*	+	*doŋali*
'a public relations club at University'		'public relations'		'a club'

This is a good example of a blend where both requirements for the preservation of the length of the head and the presence of overlapping segments can be satisfied. However, when there is a conflict between the two requirements, a blend needs to either preserve the prosodic structure of the head or maximize segments by overlapping.

(11) The relation between the overlapping segments and the length

	Blend<Head	Blend>Head	Blend=Head
Overlap	4 (80%)	15 (65%)	143 (36.5%)
No Overlap	1 (20%)	8 (35%)	249 (63.5%)
Sum	5	23	392

Table (11) shows when the length of a blend is not the same as one of its source words, there is a tendency to have overlapping segments. When a blend is shorter than its head, overlap exists with the exception of one case, and likewise, when a blend is longer than its head, overlaps exist most of the time(15 out of 23). In contrast, blends that match the length of the head have more cases without overlap (63.5%) than cases with overlap (36.5%). The difference in the statistical patterns shows that the presence of overlapping segments influences the length of the blend.

Most previous analyses of overlaps in blends have assumed that overlapping segments occur only at the switch point and do not address overlaps that occur outside a switch point (Bat-el 1996, Hong 2005). The problem with these previous analyses is that the overall similarity of two source words is consequently largely ignored if there are no overlapping segments at the switch point, such as in *nɛŋc^{h}aŋko*

(*nɛŋ(caŋko)*+ *c*^{h}*aŋko)*. Such examples are considered as blends with no overlap under the analyses because although there are identical segments from both source words, they do not occur at the switch point. Overlap, however, is important not only at switch points. Rather, overall phonological similarities between the two source words, which may involve the presence of identical/similar segments at points other than switch points, are also important (Gries 2004). It is natural to think that *nɛŋcaŋko* and *c*^{h}*aŋko* are indeed, very similar in that four segments *a,ŋ,k,o* are completely identical and one segment is different only in aspiration. Also, overlaps are not always restricted to identical segments; sometimes there emerges an overlap of phonologically dissimilar segments as shown in the previous section, with the example of *t*^{h}*ɛk*^{h}*oliʌn* = *t*^{h}*ɛ(kwʌnto)*+ (*k*^{h}*o)liʌn*. I will show in the following sections instances from Korean that show overlaps outside of switch points, i.e. the overlapping of noncontiguous segments and the phenomenon of overlapping of similar segments.

2.5.1 Overlap of noncontiguous segments

The recoverability of two source words is determined by how similar each source word and the blend are. Thus overall similarity, i.e. how many identical segments exist between two source words and the blend, is important. Overlap of noncontiguous segments means there are identical segments in the source words other than at the switch point.

The following examples are instances from English and Korean in which

overlapping segments do not exist at the switch point, but in which the two source words and blends are very similar to each other because they share some of the same noncontiguous segments.

(12) Blends with overlap of noncontiguous segments

a. *alphameric* = *alpha(betic)+(nu)meric* (Bat-el 2010)

b. *sonp^huŋki* = *son* + (s*ʌ*)*np^huŋki*

'a fan with the hand' 'hand' 'fan'

c. *chunnel* = *channel+tunnel* (Gries 2004)

In the English example (12a), there is no overlap if we only consider the switch point (alpha/betic and nu/meric). Nonetheless, *betic* and *meric* are quite similar in that *b* and *m* are both labial consonants, differing only in nasality, *t* and *r* are both alveolar but are different in continuance, and *-ic* are identical segments. In my corpus, 44 Korean blends seem to have noncontiguous overlapping segments. In example (12b), is *n* the only overlap? Or is the *s* at the initial position also an overlap? It is natural to consider *s* in the blend as an overlap segment, because it corresponds to both *s* from *son* and *s* from *sʌnp^{h}uŋki*.

There is a case in which overall phonological similarity changes the word order of the resultant blend. The following three blends with the same source word *pallent^{h}ain* 'Valentine's day,' have different word orders.

(13) Blends with the source word *pallent^{h}ain*

a. *pallenc^{h}ik^{h}in* = *pallent^{h}ain* + *c^{h}ik^{h}in*
'eating chicken on Valentine's day' 'Valentine' 'chicken'

b. *sʌllent^{h}ain* = *sʌl* + *(pa)llent^{h}ain*
'(Chinese) new year's day and Valentine's day are on the same day' 'new year's day' 'Valentine'

c. *mellont^{h}ain* = *mellon* + *(palle)nt^{h}ain*
'an event held on a website on Valentine's day' 'A name of a website' 'Valentine'

The three examples above have different semantic relations. Examples (13a) and (13b) are exocentric and (13c) is endocentric. Example (13a) shows a peculiar form where *c^{h}ik^{h}in* is not a semantic head of the blend, and is also shorter of the two source words. Considering the general word order patterns discussed in section 2.2, *c^{h}ik^{h}in* should occupy the left part. So what made *c^{h}ik^{h}in,* the shorter of the two source words go to the right side, which is unusual? The source word *c^{h}i.k^{h}in* goes to the right side in (13a) even though *c^{h}i.k^{h}in* is shorter than *pal.len.t^{h}a.in,* whereas in (13b), the shorter source word *sʌl* goes to the left side. The word order of (13a) is due to the phonological similarity between the two source words. Notice that both source words, *pal.len.t^{h}a.in* and *c^{h}i.k^{h}in* end in *in.* With this order, more segments can be preserved, compared to the reversed order *c^{h}ik^{h}int^{h}ain*. However, if we consider the overlap to be available only at the switch point, as assumed in previous studies (Bat-el 1996, Hong 2005), the word order under consideration would be difficult to understand because

the switch point of (13a) is *pal.len/c^{h}i.k^{h}in*. Also in (13c), where an overlapping segment *n* clearly exists at the switch point, the geminate *l* may be considered an additional overlap segment.

Gries (2004a) argues that overlapping occurs not only around the switch point but also across the board. He calculated a similarity index that quantifies the similarity between two source words and their blends. For example, the similarity index (SI) of *Channel* + *Tunnel* = *Chunnel* is {(6/7*6/7)+(5/6*5/7)}/2 = 0.665. *Chunnel* consists of seven graphemes, six of which are contributed by the seven-letter word *channel* and five of which are contributed by the six-letter word *tunnel*. That is to say, 85.7% (6 letters out of 7) of *channel* make up 85.7% (6 letters out of 7) of *chunnel* while 83.3% (5 letters out of 6) of *tunnel* make up 71.4% (5 letters out of 7) of *chunnel*, if we consider the overlapping segments beyond the switch point. However, if overlapping is only considered to exist at the switch point, the result is {(2/7*2/7)+(5/6*5/7)}/2 = 0.338 (Gries 2004: 657). Let us adopt the same calculation for the following examples in Korean:

(14) Similarity index of Korean blends

a. *nɛŋc^{h}aŋko* = *nɛŋcaŋko* + *c^{h}aŋko*

'a mixture of a refrigerator and storage' 'refrigerator' 'storage'

(i) Considering the noncontiguous overlapping: *nɛŋcaŋko* + *c^{h}aŋko*

{(7/8*7/8)+(5/5*5/8)}/2= 0.695

(ii) Considering the overlapping at switch point only: No overlap

{(3/8*3/8)+(5/5*5/8)}/2=0.382

b. *pallenc^{h}ik^{h}in* = *pallent^{h}ain* + *c^{h}ik^{h}in*

'eating chicken on Valentine's day' 'Valentine' 'chicken'

(i) Considering the noncontiguous overlapping: *pallent^{h}ain* + *c^{h}ik^{h}in*

{(8/10*8/11)+(5/5*5/11)}/2=0.518

(ii) Considering the overlapping at switch point only: No overlap

{(6/10*6/11)+(5/5*5/11)}/2=0.390

(iii) SI of other candidate blend *c^{h}ik^{h}int^{h}ain*: *c^{h}ik^{h}in* + *pallent^{h}ain*

{(5/9*5/10)+(5/5*5/9)}/2=0.416

If I calculate the SI based on Gries's calculation, the SI of (14a) is 0.695 when I consider *aŋko* from each source word as overlapping segments, whereas it is 0.382 when I consider only the switch point as an overlapping segment, which does not exist in this instance. The SI of (14b) is 0.518 when considering the overlap of noncontiguous segments, whereas it is 0.390 when not considering it. SI of the other potential candidate blend *c^{h}ik^{h}int^{h}ain*, which follows the general word order pattern in that the longer source word goes to the right side, is 0.416. The SI is higher than when

noncontiguous overlap is not considered, but is lower than when noncontiguous overlap is considered. Therefore the calculation above also supports the finding that it is reasonable to consider noncontiguous overlapping segments to understand Korean blends more accurately.

2.5.2 Overlap of similar segments

When we consider the overlap between two source words, overlapping segments are not restricted only to identical segments from each source word. Segments that are similar (i.e., differing in only one feature), such as aspiration in Korean, can also work as overlapping segments. The overlap of similar segments is found in approximately 15 blends from the corpus as shown below:

(15) Overlap of similar segments

a. *t^{h}ɛk^{h}oliʌn* = *t^{h}ɛ(kwʌnto)+ (k^{h}o)liʌn*

‘a mixture of Taekwondo and Korean’ ‘Taekwondo, a Korean martial art’ ‘Korean language’

b. *p^{h}o<u>k</u>arak/p^{h}o<u>k^h</u>arak* = *(po)<u>k^h</u>ɨ* + *(sut)<u>k</u>arak*

‘a mixture of a fork and a spoon’ ‘a fork’ ‘a spoon’

The example in (15a) may be interpreted as showing that both [k] of the left source word and [k^h] of the right one correspond to the word-medial [k^h] of the blend. This interpretation is based on the fact that the quadri-syllable blend in (15a) is longer

than its tri-syllabic head, *k*^{h}*oli*ʌ*n*, and many such cases that do not preserve the length of the head involve overlapping segments, as discussed in section 2.4. When the length of the head is not preserved, it is often due to overlapping segments.

Also, (15b) shows variation between *p*^{h}*okarak* and *p*^{h}*ok*^{h}*arak*. This suggests that *k* and *k*^{h} are considered to be similar enough, since they differ only in aspiration. It is possible to argue that since both aspirated and unaspirated segments exist in the source words – *k* in left word and *k*^{h} in right word – the variation is simply a matter of choice at the switch point. However, switch points more often than not occur at syllable boundaries in Korean blends, and the fact that such variation exists at all suggests that Korean speakers consider the medial [k/k^{h}] as overlapping rather than coming from only one of the two source words. In other words, considering [k/k^{h}] as the overlapping segment would aid the recoverability more. There are five examples in my data where aspiration is similarly ignored in segmental overlapping.

Cases of similar segment overlaps are also reported in previous studies of blending in other languages, such as in English. The following are English examples that exhibit overlapping of similar segments (Algeo 1977, Kelly 1998, Hong 2005).

(16) Overlap of similar segments in English blends

a. *Cl<u>antasti</u>cal =cl<u>andesti</u>ne+f<u>antasti</u>cal*

b. *d<u>ang</u> = d<u>am</u>n+h<u>ang</u>*

c. *<u>gr</u>u<u>dge</u> = <u>gr</u>u<u>tch</u>+<u>gr</u>e<u>dge</u>*

In (16a), the identical segments at the switch point are *ti*, but in fact *andesti* from

clandestine and *antasti* from *fantastical* are similar, only differing in the voice feature between *d* and *t* and vowel quality. In (16b), *m* and *ŋ* could be considered similar because of the shared nasal feature. In (16c), *grutch* and *gredge* are also very similar in that [ʧ/ʤ] are both affricates.

The examples above could be considered to be cases of similar segment overlap, since the two segments are very similar to each other. The problem, however, is determining how similar two segments must be before they can be considered as overlaps, since similarity between two segments is not categorical but gradient. Algeo (1977) points out that overlapping is a relative, rather than a categorical matter. Kelly (1998) tried to construct a measure of phonological similarity between relevant consonants using a sonorance hierarchy,[6] but lacked a method to calculate exact values. Though a consensus on similarity calculation is yet to be established, it is reasonable to posit a necessity for gradience in overlaps. Gries (2004a) argues that what constitutes an 'overlap (similar) segment' is a gradient aspect, and that the characteristics of blends can be investigated more effectively with articulatory features. Further studies are needed, however, which utilize a more elaborate measurement method than previously proposed.

[6] Kelly (1998:587) 'A measure of phonological similarity between the relevant consonants had to be constructed. Each consonant was given an integer score between 1 and 7 corresponding with its location in the following sonorance hierarchy: (1) unvoiced stops, (2) voiced stops, (3) unvoiced fricatives and affricates, (4) voiced fricatives and affricates, (5) nasals, (6) liguids, and (7) glides.'

2.6 General characteristics of Korean blends

The following generalizations can be made from the discussions above regarding Korean blends in my corpus:

(17) General characteristics of Korean blends

a. Blends are composed of the initial part of the left source word and the end part of the right source word.

b. Word order

(i) if endocentric: the semantic head goes to the right side, and determines the prosodic structure (=length) of the resultant blend.

(ii) if exocentric: the longer source word goes to the right side, and determines the prosodic structure of the blend.

c. Blends prefer to have their switch points at syllable boundaries.. In this regard, there is a strong tendency to preserve the syllable structure of source words.

d. Blends preserve the prosodic structure of the head by having the same number of syllables as the head, though this may not be true when many segments from each source word can be preserved via overlapping segments.

e. Overlapping of noncontiguous segments, as well as similar segments must be taken into account in blends.

The core feature of blending is the maximization of the phonological structure – whether segmental or prosodic – of each source word in the resultant blend. Taking

all this into account, Korean blends can be analyzed under the surface-to-surface correspondence relation between the source words and the resultant blend, as will be shown in the following section. When two source words appear to be similar with the resultant blend, the source words are also likely to be similar to each other. Thus there is a tendency for source words to be similar to each other.

3. Analysis

This section provides a theoretical analysis of Korean blends based on the descriptions given in the previous section. Firstly, I discuss two conflicting sets of faithfulness constraints involved in Korean blending. Then, surface-to-surface correspondence between source words and blends is discussed. Lastly, Optimality Theoretic analysis is discussed and Harmonic Grammar is proposed as an alternate for the analysis of Korean blends.

3.1 Phonological Faithfulness

As we discussed in the previous sections, people tend to create blends intentionally, usually for fun. To achieve the desired effect, recoverability of the source words must be ensured. If a listener cannot recover the two source words involved in the formation of the blend, that blend cannot function as intended. For this reason, a

blend should be maximally similar to its source words. ‘Similarity’ could be defined in various ways, such as in prosodic structure, segmental quality, or syllable structure. In section 2, we have seen the conflict between requirements for these similarities to ensure the recoverability of source words.

First of all, the similarity of a blend’s prosodic structure to the two source words is important for recoverability. Blends across languages typically preserve the prosodic structure of one of the source words (usually the head), which allow people to recognize the head easily (Piñeros 2004). In Korean blends, the prosodic structure may be implemented in terms of length, in other words, the number of syllables in a blend. At the same time, blends tend to preserve as many segments of the source words as possible, also for the sake of recoverability. Thus among many requirements, the formation of a blend aims toward the following two competing goals (cf. Bat-el 2006, Tomaszewicz 2008).

(18) Two competing goals of blending

a. Blends must have the prosodic structure of one of its source word, usually the ‘(semantic/phonological) head’

b. Blends must have a maximum number of segmental correspondents in both source words

Firstly, blends must have a prosodic structure that is plausible for a single word in the language, and it usually follows that of the head (semantic head for endocentric blends, and the longer word for exocentric blends). Thus, ‘the prosodic structure of

the head' is preserved (Piñeros 2004). There have been other studies (Bat-el 1996, Piñeros 2004, Hong 2005, Trommer and Zimmermann 2010) that analyzed blends as a part of 'Prosodic Morphology', as with other morphological processes such as truncation and reduplication. McCarthy and Prince (1986, 1990) proposed a Prosodic Morphology Hypothesis which states that "templates are defined in terms of authentic units of prosody: mora, syllable, foot, prosodic word, and so on" (1990:209). Blending can indeed be considered a type of prosodic morphology, but one difference is that the prosodic template of blends can vary as a function of the prosodic structure of the head. The prosodic structure of languages like English and Spanish is usually defined in terms of stress patterns. In previous studies, the stress pattern of English blends was usually that of a head (Bat-el 2010). In Korean blends, the requirement to preserve the prosodic structure of the head word may be satisfied at the syllable level. As shown in the previous section, only the number of syllables of the head needs to be maintained in Korean blends.

Secondly, a blend must preserve as much of the segmental structure from its source words as possible – whether head or non-head – for semantic 'recoverability' of the two source words (Bat-el 2006). It is obvious that the more segmental materials from the base words survive in the resultant blend, the easier they are to identify. Since the size of a blend is limited to the size of its head due to (18a) above, the two goals are often in conflict with each other. Therefore, the blending process necessarily involves the resolution of the two competing demands for faithfulness: (i) faithful to the prosodic structure of the head, (ii) faithful to the segments of both source words.

An interesting aspect of blending is that unlike many phonological processes where faithfulness and markedness constraints are in conflict, it is two sets of faithfulness constraints that are competing with each other.

For the sake of preserving more segments from the two source words, it is desirable for the blend to have identical segments from both source words (Piñeros 2004). This is why blends tend to have overlap segments. The primary point of contention, therefore, is between the two types of faithfulness constraints.

3.2 Surface-to-Surface Correspondence

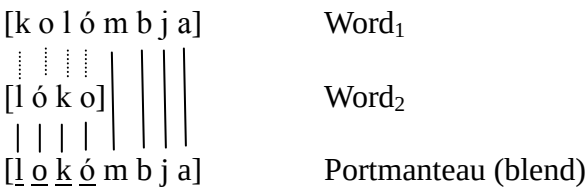
To propose the correspondence relation of Korean blends and their source words, I will adopt Correspondence Theory, which explains the faithfulness relation between two forms (McCarthy & Prince 1995).

Bat-el (1996) and Piñeros (2004) propose surface-to-surface (output-to-output) correspondence constraints between source words and blends. Output-to-output correspondence is the faithfulness requirement between output forms, as opposed to input-output correspondence, which requires faithfulness of the output to its input. Truncation and reduplication have been analyzed under a type of output-to-output correspondence, where the truncated form and its base form should be similar to each other and a reduplicant and its base also should be faithful to each other.

The question here is how to determine the output-to-output relationship between source words and blends. Previous output-to-output correspondence analyses of blending have proposed different correspondence relations. Bat-el (1996) proposed a

correspondence for syllable number, as well as for segments between source words and the blend. However, she does not provide a detailed definition of the correspondence relation between them. When she analyzed Hebrew blending, the correspondence between syllables and that of segments were undistinguished and unclear. On the other hand, Piñeros (2004) proposes superimposition, in other words, an overlapping of the non-head source word upon the head, as in (19).

(19) Blends replicate the structure of one of their source words (adapted from Piñeros 2004:208)



In this analysis, there is no truncation of the source words. Instead, all of the segments correspond in the resultant blend, even though they may be different in segmental quality. However, this view can hold for a very limited number of blends in which the non-head source word is shorter than the head, which he calls a 'portmanteau.'

To overcome these shortcomings of the previous studies, a new correspondence relation of blends needs to be defined. A blend is in a surface-to-surface correspondence with each of its source words. Source words and their resultant blend are in a correspondence relation, and such a relation requires similarity between the two source words and the blend (cf. Zuraw 2002). As a result, the faithfulness

requirements, such as segmental maximization or prosodic structure maximization of each source word are in competion with each other. For example, the head source word of the blend usually can correspond to the blend with respect to its prosodic structure, but segmental maximization of the head may be violated at the initial part of the blend. The resolution of this conflict can be analyzed under the framework of Optimality Theory.

3.3 Optimality Theoretic analysis

In this section, I will conduct an Optimality Theoretic analysis of Korean blends. Optimality Theory (OT) is a framework that explains phonological phenomena as a competition of violable constraints. OT has been adopted in previous analyses of blends in languages, such as Hebrew and English (Bat-el 1996, Hong 2005). Bat-el (1996) attempted the first OT approach towards blends, and in so doing she argues that there is output-output correspondence between a blend and the output forms of its source words. The following constraints are mainly adopted from Bat-el (1996) while some constraints are from Piñeros (2004) with some new additions for Korean blends.

(20) Constraints for Alignment of blends

Anchor-L: The left edge of the left source word (SW_1) must correspond with the left edge of a blend.

Anchor-R: The right edge of the right source word (SW_2) must correspond with the right edge of a blend.

Align (Sem-HD)-R: A semantic head must align at the right side of the blend.

These constraints are adopted for the analysis of Korean blends that take the initial part of the left SW and the end part of the right SW. These constraints are undominated most of the time. This is generally the case for blends cross-linguistically, and the reason for this is not difficult to understand, since having the preserved segments in the blend arranged in the same order as the source words would facilitate better recoverability. Thus, it is natural that the first part of the first word occupies the initial position of the blend, and end part of the second goes to the end part of the blend. Alignment for the semantic head also works for most blends. A few exceptions are attested in my corpus, and these are explained in section 4.

The following set of constraints concern prosodic structure of the Korean blend.

(21) Constraints for Prosodic structure

Max-σ (HD): Every syllable in the head must have a correspondent in the blend

Dep-σ (HD): Every syllable in the blend must have a correspondent in the head

The prosodic template is the most important factor for a phonological approach to

Korean blends. The constraints above are adopted as templatic constraints. I will apply the Max-syllable and Dep-syllable constraints. Max-syllable requires that each syllable in the head be represented in the blend, and Dep-syllable requires that each syllable in the blend have correspondents in the head. Thus the syllable number of the head needs to be preserved in the resultant blend to satisfy both of these constraints. These constraints only refer to the head since the head, not the non-head, governs the prosodic structure of the blend. The correspondence relationship works between output forms of a head and a blend. At this point, we need to remember that even though the head and blend retain the same prosodic structure, their segmental compositions may be different. Under the assumption that syllables of the head and the blend may correspond to each other even when they have different constituent segments or internal structures, the correspondence constraints will have the effect of maintaining the syllable count of the head in the blend. This naturally leads to the necessity of segmental faithfulness, given in (22) below.

(22) Constraint for Maximization of segments

Max-seg (HD/N-HD): Every segment in the Head/Non-Head must have a correspondent in the blend

For the preservation of segments from both source words, I use a Max-segment constraint. This is a correspondence between source words and a blend. Similar to the syllable correspondence, corresponding segments need not be identical in their segmental quality. In other words, featurally different segments still could be

corresponding segments while violating a featural faithfulness constraint, i.e. IDENTITY. Also, blends allow a double correspondence in which one segment in a blend can correspond to two segments: one from the non-head and the other from the head. Such an arrangement will violate Morphemic Disjointness (MorphDis), a constraint which prohibits double correspondence. However, this constraint is always dominated by other constraints, and thus will not be discussed further.

(23) MorphDis: Morphemic Disjointness

Distinct instances of morphemes have distinct contents, tokenwise. (McCarthy & Prince 1995, cited in Piñeros 2004)

In Korean blends, an additional constraint is active for preserving the syllable structure.

(24) Constraint for syllable structure

ID (SW-BL) Syllable Position: A segment in a blend occupies the same syllable position as its correspondent in its source word.

I add the constraint in (24) to preserve the syllable structure of source words. It requires that if a segment in the source word corresponds to a segment in the resultant blend, the syllable position must be identical. In other words, if the segment was in the onset position in the source word, it should likewise be an onset in the resultant blend.

With these constraints, adopting the ranking shown below, I will analyze the common types of non-overlapping blends. To illustrate the correspondence relation, I will show the syllable correspondence of each candidate in a tableau in (26ii).

(25) Constraint Rankings
Anchor-L/R, Align (Sem-HD)-R, Max-σ (HD), Dep-σ (HD) >> Max (HD/N-HD)-seg

As discussed in the generalization of Korean blends, each source word should be aligned to the left/right edge of the blend, and semantic heads should occupy the right side. Therefore the alignment constraints are undominated. Since most blends preserve the length of the head, the prosodic structure faithfulness constraints are also undominated.

Following is the analysis of a blend without overlaps, with the constraint ranking given in (25).

(26) Analysis of *taktulki*

taktulki	=	*tak*	+	*pitulki*
'a dove which is as fat as a chicken'		'chicken'		'dove'

(i) Syllable Correspondence

σ_1 + σ_2 σ_3 σ_4
[tak] + [pi] [tul] [ki]

a. σ_2 σ_3 σ_4
[tak] [tul] [ki]
b. σ_1 σ_2 σ_3 σ_4
[tak] [pi] [tul] [ki]
c. σ_2 σ_3 σ_4
[pi] [tul] [tak]

(ii) Tableau

tak +pitulki	Anchor-L/R Align-Sem(HD)-R	Max-σ(HD)/ Dep- σ(HD)	Max-seg	
a. ☞*taktulki*				p,i
b. *takpitulki*		σ!		
c. *pitultak*	*!			k,i

In (26b), '*takpitulki*' which has no segmental loss, violates the prosodic faithfulness constraint, Dep-σ. On the other hand, (26a) *taktulki* violates Max-seg, but the higher ranked prosodic structure faithfulness is satisfied because it has three syllables. Therefore, the candidate with segment loss is optimal.

However, there is an example that cannot be explained with only these constraints.

(27) Analysis of *ocik^{h}ʌl* (I)

o.cik^{h}ʌl	=	*o.p^{h}ela*	+	*mjucik^{h}ʌl*
'a mixture of opera and a musical'		'opera'		'musical'

o.p^{h}ela+ mjucikʌl	Max-Syll(HD)/ Dep-Syll (HD)	Max-seg	
a. *o.cik^{h}ʌl*		p^{h},e,l,a	m,j,u
b.☹ *op.cik^{h}ʌl*		e,l,a	m,j,u

Given the same constraint ranking as in (26), (27b) is incorrectly predicted to be the winner because it is the same length as (27a) but preserves more segments from the source word. To explain such cases, we need to add the constraint presented in (24) in the ranking to preserve the syllable structure of the source word. The revised ranking involving this constraint is shown below.

(28) Constraint Rankings

ID-SW-BL (Syllable position)> Max(HD/N-HD)-seg

With the new constraint ranking, a reanalysis of *ocik^{h}ʌl* is as follows:

(29) Analysis of *ocik^{h}ʌl* (II)

ocik^{h}ʌl = *op^{h}ela* + *mjucik^{h}ʌl*

'a mixture of 'opera' 'musical'
opera and a musical'

(i) Syllable/segmental Correspondence

σ_1 σ_2 σ_3 + σ_4 σ_5 σ_6
[o$_1$] [p$^{h}_{2}$e$_3$] [l$_4$a$_5$] [m$_6$j$_7$u$_8$] [c$_9$i$_{10}$] [k$^{h}_{11}$ə$_{12}$l$_{13}$]

a. σ_4 σ_5 σ_6
[o$_1$] [c$_9$i$_{10}$] [k$^{h}_{11}$ə$_{12}$l$_{13}$]

b. σ_4 σ_5 σ_6
[o$_1$ p$_2$] [c$_9$i$_{10}$] [k$^{h}_{11}$ə$_{12}$l$_{13}$]

(ii) Tableau

op^{h}ela+ mjucikʌl	Max-Syll (HD) / Dep-Syll (HD)	ID-SW-BL (Syllable position)	Max-seg	
a. ☞ *ocik^{h}ʌl*			p^{h},e,l,a	m,j,u
b. *opcik^{h}ʌl*		*!	e,l,a	m,j,u

In this case, (29b) *opcik^{h}ʌl* preserves more segments from the source words, but *p* is in the coda position in the blend whereas it is an onset in the source word. Thus, ID-SW-BL (Syllable position) outranks Max-seg, and the optimal output is *ocik^{h}ʌl*.

The main characteristic of blending is an overlapping segment. Blends with overlapping segments require double correspondence in that one segment in the blend may have correspondents in both source words. To allow double correspondence, a constraint that forbids the double correspondence, 'MorphDis,' must be dominated by Max-seg.

(30) Constraint Rankings

Max-syll (HD), Dep-syll(HD) > Max(HD/N-HD)-seg > MorphDis

The following shows an analysis of a blend with an overlapping segment:

(31) Analysis of *camp^{h}oci$_{\Lambda}$m*

camp^{h}oci$_{\Lambda}$m = *cam* + *simp^{h}oci$_{\Lambda}$m*

'a symposium that is really boring' = 'a sleep' + 'a symposium'

(i) Syllable/segmental Correspondence

σ_1 + σ_2 σ_3 σ_4 σ_5

$[c_1a_2m_3]$ + $[s_4i_5m_6]$ $[p^h{}_7o_8]$ $[c_9i_{10}]$ $[ə_{11}m_{12}]$

a. σ_2 σ_3 σ_4 σ_5

$[c_1a_2\underline{m}_{3,6}]$ $[p^h{}_7o_8]$ $[c_9i_{10}]$ $[ə_{11}m_{12}]$

b. σ_2 σ_3 σ_4 σ_5

$[c_1a_2m_3]$ $[p^h{}_7o_8]$ $[c_9i_{10}]$ $[ə_{11}m_{12}]$

c. σ_1 σ_2 σ_3 σ_4 σ_5

$[c_1a_2m_3]$ $[s_4i_5m_6]$ $[p^h{}_7o_8]$ $[c_9i_{10}]$ $[ə_{11}m_{12}]$

(ii) Tableau

cam+simp^{h}oci$_{\Lambda}$m	Max-σ(HD)/ Dep- σ (HD)	Max-seg		MorphDis
a. ☞*camp^{h}oci$_{\Lambda}$m*			s,i	m
b. *camp^{h}oci$_{\Lambda}$m*			s,i,m	
c. *camsimp^{h}oci$_{\Lambda}$m*	σ!			

Candidates (31a) and (31b) have identical segments, but different correspondence

relations. (31a) is a candidate with double correspondence where *m* has correspondents in both source words, and it wins out over (31b), a candidate without double correspondence. This example is easy to capture because it preserves the prosodic structure and at the same time, segmental maximization is preserved with a double correspondence. As we have seen in the previous section, the length of the head is generally preserved. However, it could be violated in certain cases, such as in the following:

(32) Analysis of *to<u>ne</u>t^{h}ic ɨn*

to<u>ne</u>t^{h}ic ɨn = to<u>ne</u>(isjʌn) +<u>ne</u>t^{h}ic ɨn

'a netizen who donates' 'donation' 'netizen'

tone.isjʌn + net^{h}icɨn	Max-σ (HD)/ Dep-σ (HD)	Max-seg	
a.☹ *tot^{h}icɨn*		n,e,i,s,j,ʌ,n	n,e
b. *to<u>ne</u>t^{h}icɨn*	σ!	i,s,j,ʌ,n	

This case cannot be explained via a strict domination between constraints as in the previous examples. In the previous analysis, the output form that is faithful to the length of the blend always wins over the form faithful to the segmental maximization. In other words, regardless of how much segmental faithfulness is preserved, if prosodic faithfulness is violated, the relevant candidate cannot be optimal. In this case, (32b), which is the actual output, is never able to win over (32a), because (32b) violates prosodic faithfulness.

Blending involves the competition of two sets of faithfulness constraints, and most of the time prosodic faithfulness wins over segmental faithfulness. An OT analysis can explain such cases fairly well, but examples like (32b), which were discussed in section 2.4.2 as 'exceptional patterns', cannot be accounted for under the framework.

This leads to the necessity of an alternate framework that can explain the exceptional cases, especially those not faithful to the prosodic structure of the head. I will consider a model that allows the violation of dominant constraints.

3.4 Weighted Constraints: Harmonic Grammar

Since an OT analysis cannot account for some patterns of blending in Korean, other frameworks that allow constraint weighting may be better suited for the analysis of such exceptional cases. For weighted constraints, I will adopt the framework of Harmonic Grammar (Legendre, Miyata, and Smolensky 1990, Smolensky and Legendre 2006). Harmonic Grammar (HG) is similar to OT in that they also represent the output form with the relative strengths of competing constraints. The difference is that constraints in HG are not subject to strict domination. Rather, the constraints have numerical weights. These numeral weights can lead to a ganging effect. A candidate with severe violations of constraints with lower weights may win over another candidate with lesser violations of constraints with higher weights (Pater 2009).

The problem mentioned in the previous section can be solved if I assign a weight

to each of the faithfulness constraints. Prosodic faithfulness constraints have higher weights than segmental faithfulness constraints, as prosodic faithfulness constraints dominate segmental faithfulness constraints in OT. But sometimes an output that violates the prosodic faithfulness could win over a form that violates the segmental faithfulness too much, which is impossible in the framework of OT. This means that example (32), which was problematic within the framework of OT, can be analyzed with HG. A HG-based analysis is shown below. (Weights for each constraint are yet tentative.)

(33) Overlapping segments

	2	1		0.5	
tone.isjʌn + *net^{h}icɨn*	Max-Syll (HD) / Dep-Syll (HD)	Max-seg		MorphDis	
a. *tot^{h}icɨn*		n,e,i,s,j,ʌ,n	n,e		-9
b. ☞*to<u>ne</u>t^{h}icɨn*	σ	i,s,j,ʌ,n		n,e	-8

In (32), with the framework of OT, *tot^{h}ic ɨn* won over *to<u>ne</u>t^{h}ic ɨn* because of the strict domination of the prosodic faithfulness constraints over the segmental faithfulness constraints. However, a different analysis is possible in HG. In tableau (33), weights are assigned to each constraint, as given on the first row of the tableau. For each candidate, the number of violation marks incurred for each constraint is multiplied by the weight of the constraint (one violation is '-1,' expressed as a negative number), then added together. A sum of weight*violation marks is given on the rightmost column. For candidate (33a), the calculation is '2*0+1*-9+0.5*0=-9.'

For candidate (33b), '2*-1+1*-5+0.5*-2=-8.' Even though *tot^{h}icɨn* does not violate the prosodic structure constraint, it violates Max-seg too much – four more violations than *to<u>ne</u>t^{h}icɨn*. Therefore, *to<u>ne</u>t^{h}icɨn* becomes the optimal output, although it exceeds the syllable number of the head.

Let us now consider the case where the prosodic structure of the head is not preserved, with the overlapping of non-identical but similar segments. This case also cannot be captured within the framework of OT, because OT does not let the candidate with violation of prosodic structure faithfulness to be the optimal output. The analysis in (34) provides a case where similar segments are not considered to be overlaps.

(34) The case of *t^{h}ɛk^{h}oliʌn*

t^{h}ɛk^{h}oliʌn = *t^{h}ɛ(kwʌnto)* + *(k^{h}o)liʌn*

'a mixture of Taekwondo and Korean' 'Taekwondo, a Korean martial art' 'Korean language'

	2	1		0.5	
t^{h}ɛkwʌnto + k^{h}oliʌn	Max-σ(HD) /Dep-σ (HD)	Max-seg		MorphDis	
a. *t^{h}ɛk^{h}oliʌn*	σ	k,w, ʌ,n,t,o			-8
b. *t^{h}ɛliʌn*		k,w, ʌ,n,t,o	k^h,o		-8

In this case, since /k/ and /k^h/ do not count as corresponding segments, there would be no preference between candidates (34a) and (34b). To explain the pattern under

consideration, we need one more constraint for feature identity as follows:

(35) ID-SW-BL (Feature)

Correspondent segments must agree in feature specifications.

Using this constraint, I will show how a blend with overlap of non-identical segments can be the optimal output. Again, using the example *t^{h}ɛk^{h}oliʌn = t^{h}ɛ(kwʌnto)+ (k^{h}o)liʌn*, I assume that /k/ from t^{h}ɛkwʌnto and /k^h/ from *k^{h}oliʌn* both correspond to /k^h/ in *k^{h}oliʌn*, but the feature identity between /k/ and /k^h/ is violated. A small weight of 0.3 is assigned to the feature faithfulness constraint.[7]

(36) Overlap with similar segments

t^{h}ɛk^{h}oliʌn = t^{h}ɛ(kwʌnto)+ (k^{h}o)liʌn

	2	1		0.5	0.3	
t^{h}ɛkwʌnto+ k^{h}oliʌn	Max-σ(HD) /Dep-σ (HD)	Max-seg		Morph Dis	ID-SW-BL feature(asp)	
a. *t^{h}ɛk^{h}oliʌn*	σ	k,w, ʌ,n,t,o				-8
☞b. *t^{h}ɛk^{h}oliʌn*	σ	w, ʌ,n,t,o		k	*	-7.8
c. *t^{h}ɛliʌn*		k,w, ʌ,n,t,o	k^h,o			-8

In candidate (36b), [k^h] is in double correspondence with [k] and [k^h] of the source words. Even though it violates the ID-feature constraint, it is optimal because it better satisfies Max-seg than the other candidates. Note that segments that are totally different from each other would not be in a correspondence relation because it would

[7] Another possible explanation is that this example is blended based on the English spelling, 'Taekwondo,' and 'Korean.' Even under this interpretation, it is still true that it does not preserve the prosodic structure of 'Korean' due to the overlap segment 'k.'

incur a serious violation of Identity constraints.

For the analysis of cases in which overlapping occurs in a place other than at the switch point, overlap of noncontiguous segments, such as in *pallenc^{h}ik^{h}in* ‘eating chicken on Valentine’s day’ (= *pallent^{h}ain* ‘Valentine’ + *c^{h}ik^{h}in* ‘chicken’), we need a constraint for the contiguity of corresponding segments. CONTIGUITY is a faithfulness constraint that requires the contiguity of the segments in correspondence relations (McCarthy and Prince 1995).

(37) CONTIGUITY

O-Contiguity (non-HD/HD): No intrusion in the non-head/head source word

The portion of the blend standing in correspondence with the non-head/head source word must form a contiguous string.

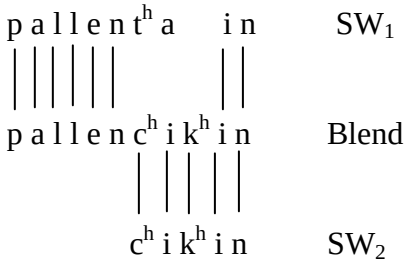
I-Contiguity (non-HD/HD): No skipping in the non-head/head source word

The portion of the non-head/head standing in correspondence with blend must form a contiguous string. (Piñeros 2004)

O-Contiguity stands for no intrusion between two correspondents. It means that when parts of a source word are represented in a blend, a segment that is not a part of that source word should not intrude between the segmental strings of the source word. I-Contiguity stands for no skipping. Parts coming from the source word should be contiguous, and no segment in that segmental string shoud be omitted in the resultant blend. I will simply use CONTIGUITY as a cover-all constraint that requires the blend and the source word to have contiguous correspondents, and give it a small

weight of 0.3. The relevant correspondence relation can be seen below:

(38) Correspondence relation between *pal.len.t^{h}a.in*, *c^{h}i.k^{h}in* and *pal.len.c^{h}i.k^{h}in*



This shows an overlapping of noncontiguous segments in that segments that overlap are not contiguous. As shown in (38) above, non-contiguous strings, *pallen* and *in* in SW_1 have correspondents in the blend, even though *t^{h}a* does not, and thus the resultant blend violates CONTIGUITY. The following shows an analysis of this blend:

(39) Overlap of noncontiguous segments

pallenc^{h}ik^{h}in' = *pallent^{h}ain* + *c^{h}ik^{h}in*
'eating chicken on Valentine's day' 'Valentine' 'chicken'

	2	1		0.5	0.3	
pal.len.t^{h}a.in+ *c^{h}i.k^{h}in*	Max-σ(HD) Dep-σ(HD)	Max-seg		Morph Dis	I/O-Contiguity	
a. ☞*pal.len.c^{h}i.k^{h}in*		t^h,a		i,n	t^h,a	-3.6
b. *c^{h}i.k^{h}in.t^{h}a.in*			p,a,l,l,e			-5
c. *pal.len.c^{h}i.k^{h}in*		t^h,a,i,n				-4

Candidate (39a) is the winner with the correspondence relation shown in (38). It

preserves more segments than the other candidates with the overlap of noncontiguous segments, and is thus the optimal output, even though CONTIGUITY is violated. (39c) is not optimal because it does not allow *in* to be doubly correspondent.

Within the framework of HG, exceptional patterns that follow the length of the left source word instead of the right source word (head) could also be analyzed. Since it is not possible within the framework of OT, a comparison of the two analyses is given as follows:

(40) Analysis of *kʰʌncʌpʌkʰitɨ*

kʰʌncʌpʌkʰitɨ = *kʰʌncʌpʌtʰipɨ* + *kʰitɨ*

'A young person who is conservative' 'conservative' 'kid'

(i) OT Analysis

kʰʌncʌpʌtʰipɨ + *kʰitɨ*	Max-σ(HD) /Dep-σ (HD)	Max-seg	
a. *kʰʌncʌpʌkʰitɨ*	σ! σ, σ	tʰ,i,p,ɨ	
b. ☹ *kʰʌntɨ*		c,ʌ,p,ʌ,tʰ,i,p,ɨ	kʰ,i

(ii) HG Analysis

	2	1		0.5	0.3	
kʰʌncʌpʌtʰipɨ+ *kʰitɨ*	Max-σ(HD) /Dep-σ(HD)	Max-seg		Morph Dis	I/O-Contiguity	
a. ☞ *kʰʌncʌpʌkʰitɨ*	σ, σ, σ	tʰ,p,		i, ɨ	kʰ,t	-9.6
b. *kʰʌntɨ*		c,ʌ,p,ʌ,tʰ ,i,p, ɨ	kʰ ,i			-10

As shown in (40i), an OT analysis cannot capture the fact that the blend preserves the prosodic structure of the left source word instead of the right, because faithfulness constraints for preserving the length of the head dominate the segmental faithfulness constraint. However, a HG analysis can provide an explanation for this. Though *kʰʌncʌpʌkʰitɨ* violates prosodic structure faithfulness, by following the length of the left source word, it preserves more segments. Thus *kʰʌncʌpʌkʰitɨ* is allowed to become the optimal output.

To sum up, by applying Harmonic Grammar, the exceptional patterns of Korean blends can be explained. As I mentioned earlier, there is still a need to calculate the exact weight of the constraints with all the data in the corpus. The important point here, however, is that there are two sets of faithfulness constraints competing in Korean blending, and that their relation is not always strict. Blending aims to gain the best recoverability. Prosodic structure faithfulness is ranked higher than segmental maximization faithfulness, but sometimes, preserving the segmental maximization and sacrificing the prosodic structure faithfulness yields better recoverability. Considering this characteristic of Korean blends, Harmonic Grammar might be a better framework for the analysis of Korean blending than Optimality Theory.

4. Residual Cases

In this section, I will introduce other interesting cases of Korean blends that were not covered in previous sections. These cases also exhibit the general patterns and are peculiar only in some senses. Most of them could be included in the analysis of previous sections, if more constraints were added. The first set of cases involves lexical selection, and the second set of cases, uniqueness (Bat-el 1996), in that a blend is distinct from each of the source word. The third set of cases show the preservation of syllables in a position other than the initial of the left source word, and the fourth set is about combining forms, forms that used recurrently in blending.

4.1 Lexical Selection

As I have discussed so far, phonological factors affect what the resultant blend looks like. More than this, phonological similarity actually plays a role when selecting source words for blending. Blending is not always a combination of two given words with phonological forms, but sometimes a combination of two meanings without phonological forms. Thus if there are many words with the same meaning, phonologically similar ones would be chosen among those words. Gries (2004) argues that the speakers first have a certain intended meaning in his/her mind, then select the words that can carry the meaning required for the blend and are similar to each other in phonological patterns. He conducted a quantitative study of similarities between two source words and their blends, and found that source words and resultant blends

that already exist are more similar to each other compared to blends created randomly via simulation (average Similarity Index 0.489: 0.352). Examples for such blends are attested in my corpus.

(41) Lexical selection due to phonological similarity

a. *kuntɛlia* = *kuntɛ* + *lottɛlia*

‘a hamburger made in the army’ ‘army’ ‘a fast-food restaurant in Korea’

b. *kuntɛsɨlika* = *kuntɛ* + *puntɛsɨlika*

‘a soccer league in the army’ ‘army’ ‘Bundesliga, German soccer league’

In the blend in (41a), a blend coiner intended to express a hamburger specifically made in the army. For the first source word, *kunte* ‘army’ seems to have no competing candidate. In contrast, for the second source word, there are many candidates meaning ‘hamburger’ including McDonalds and Burger King. *Lottɛlia* is selected as a source word and wins out over McDonald’s or Burger King due to its phonological similarity to *kuntɛ*. This is interesting, because *lottɛlia* is not the most popular eatery in Korea. Semantically, the blend requires a word meaning ‘kind of fast-food restaurant,’ and likely candidates could be any of a variety of fast-food restaurants, such as *lottɛlia*, Mcdonald’s, Burger King, and so on. The lexical selection based on phonological similarity can be illustrated in the following:

(42) *kuntɛlia* = *kuntɛ* + *lottɛlia*

‘a hamburger made in the army’ ‘army’ ‘a fast-food restaurant in Korea’

kuntɛ + [semantic=kind of fastfood store	Max-σ (HD) / Dep-σ (HD)	Max-seg	
a.☞*kuntɛlia* (*kuntɛ*+ *lottɛlia)*			l,o,t
b. *kuntonalti* (*kuntɛ*+ *mɛktonalti*)		e	m,ɛ,!k

As shown in (42), the input for the second source word is specified only with its meaning. It is possible to have only the meaning as an input because blending is concerned only with the output-to-output correspondence. The candidate can be either a combination with *lottɛlia* or *mɛktonalti* ‘McDonald’s,’ and the optimal output is *kuntɛlia* due to phonological similarity. These examples show that phonology in fact leads to the lexical selection in blending.

A similar case arises with the blend in (42b). In this case, the blend coiner also chose *puntɛsilika* rather than *pilimiʌliki* ‘premier league in England’or *pilimelalika* ‘primera liga in Spain,’ because of the overlap segments *untɛ*, despite the fact that the Premier League or Primera Liga are more popular among Koreans these days.

There are other examples in my corpus. In Korean, the same meaning may be denoted by two or three words, one in native Korean, one in Sino-Korean, and lastly by a loanword. While blending can and does ignore the etymology of the source

words in many cases, there is a tendency to combine source words of the same etymology, if possible.

(43) Blends with ‘car’ from source words of different etymologies

a. *c^{h}akjepu* = *c^{h}a* + *(k)akjepu*
‘a log of car expenses’ ‘car (Korean)’ ‘a log of household expenses’
b. *k^{h}ak^{h}et^{h}iŋ* = *k^{h}a* + *(m)ak^{h}et^{h}iŋ*
‘car marketing’ ‘car (loanword)’ ‘marketing’

As shown in (43), Koreans use two different words meaning ‘car’; one is Sino-Korean *c^{h}a* and the other is the English loanword *k^{h}a*. In (43a), the blend coiner chose *c^{h}a*, because the other source word *kakjepu* is Sino-Korean. On the other hand, (43b) has a loanword form because the other source word is also a loanword.

There is a case where phonological similarity determines the source word among words of different etymologies that denote the same meaning as shown below:

(44) Instances of choosing words based on phonological similarity

curumapʌl = *cu* + *(p)ulumapʌl*
‘a drinking game’ ‘alcohol (Sino-Korean)’ ‘a game called blue marble’

In (44), *cu* is selected over *sul*, a native Korean word, which is used more frequently. Since *pulumapʌl* is a loanword, there should be no preference for matching the etymology with either a native or Sino-Korean word. There is also a widely used loanword meaning ‘alcohol,’ *alk^{h}ol*, but it is not a powerful candidate because of the

phonological differences with the semantic head. *cu* and *sul* both have the overlap segment *u*. However, because of the similarity of the syllable structure of *cu* and *pu* – both have coda-less syllable structures – it is more preferable for recoverability. In sum, given a choice among words with the same meaning, phonologically the most similar are selected as source words for blending.

4.2 Uniqueness

Blends avoid having forms identical to one of the source words (Bat-el 1996, Piñeros 2004) because distinguishing the blend from the source word would be impossible. There is an interesting instance in Korean that shows this tendency:

(45) *mʌp^{h}ia* = *matʌ* + *map^{h}ia*

‘mother who is like the mafia’ ‘mother’ ‘mafia’

In (45), *ma* from both source words perfectly overlaps, and the optimal blend should be *map^{h}ia*, but the result would be identical to one of the source words in this case, and thus it would be impossible to recover the word *matʌ*. As a result, the blend changes the vowel slightly from *a* to *ʌ*. This change can be explained easily by adding a constraint, for example, UNIQUENESS, which requires a blend to be phonologically distinct from each of its source words. (Bat-el 1996). However, a blend can sometimes be made identical to one of its source words on purpose, usually

for a playful effect.

(46) *mesia* = *mesi* + *mesia*
'Messi as a messiah' 'Messi, a soccer player' 'Messiah'

Example (46) is a case in which people use the word *mesia* for fun, to express how good of a soccer player Messi is. This shows a social aspect of blends, in which blends in many cases are lexical jokes. Other than in such cases, however, blends generally avoid being identical to one of the source words. This shows that blends are, in fact, very grammatical, but at the same time can have a humorous function, which may affect the formation of blends. This means that an accurate understanding of such social functions would aid in better analyses of the phenomenon of blend-formations.

4.3 Selecting the syllable

In previous sections, I showed that it is natural to combine the initial part of a left source word and the non-initial part of a right source word. However, there are some exceptions to this general pattern in my corpus:

(47) *ult^{h}ollic* = (*sʌ*)*ul*t*ɛ* + (*k^{h}a*)*t^{h}ollic*
'Seoul National University's Catholic club' 'Seoul National University' 'Catholic'

Instead of choosing the first syllable of *sʌul* in (47), namely *sʌ*, the blend coiner

has chosen the second and final syllable *ul* instead. According to the basic pattern of blending, *ul* should be truncated instead of *sʌ*. This phenomenon requires further investigation, but it seems likely that *ul* was considered to be more readily recognizable and chosen to avoid confusion, since *sʌ* is a frequently used syllable in words other than *sʌul*, and there is another university in Korea, *sʌkaŋtɛ* 'Seokang University', whose name also begins with *sʌ*. This tendency can be substantiated with other examples. In my corpus, there are also many cases of forming nicknames by combining two words. In this type of blending, the actual name of the person who has the nickname usually occupies the left side. Some interesting instances that I found that support the odd case are presented in (48) below.

(48) Nicknames with *Honaldu* 'Ronaldo, a famous soccer player'

a. *Yʌnaldu* = *Yʌ Minci* + *Honaldu*
'a Korean soccer player' 'Ronaldo'

b. *C^{h}ʌŋnaldu* = *Yi C^{h}ʌŋjoŋ* + *Honaldu*
'a Korean soccer player' 'Ronaldo'

Both soccer players are combined with *Ronaldo* as a nickname, meaning they are as good as *Ronaldo*. However, the syllables selected from their names are different. While the family name *Yʌ* was selected for (48a), the blend coiner chose a part of the given name *C^{h}ʌŋ* for the blend in (48b). One interpretation of this choice is that since

Yʌɴŋɔŋ is a very rare family name in Korea, people are likely to recognize the soccer player's name from the syllable *Yʌɴŋ* alone. On the other hand, *Yi* is one of the most common family names in Korea, and many good soccer players have the same family name *Yi*. Thus, *C^{h}ʌɴŋ* was chosen instead for easy access to the full name *Yi C^{h}ʌɴŋjɔŋ*. This ease of recognition affects the creation of blends.

In sum, syllables other than the usual left or right edge of the source word can be selected for blending for the sake of recoverability. However, the matter of which syllable is to be considered more representative of a certain word is not always straightforward. The frequency of the syllable can be a possible factor, as well as phonetic characteristics of the syllable.

4.4. Combining forms

One difficulty in describing and analyzing Korean blends is that at least some forms show characteristics of other word-formation processes such as suffixation. Sometimes, the splinter of the right source word of a blend is repeatedly used in creating some other blends, behaving like a suffix. Blends with such suffix-like splinters are called 'combining forms.'

Well-known English examples include words ending in *–holic* (from *alcoholic*), such as *workaholic* and *shopaholic*. Korean combining forms include words ending in *–t^{h}ing* (from *mit^{h}ing* 'meeting'), for instance, *soket^{h}ing* 'a blind date.' These forms may have begun as blends, but have later become suffix-like. Some interesting forms

from my corpus that vary between blends and combining forms are shown below.

(49) Examples of variation

a. *kʌntʰekʰɨ / kʌnkaŋtʰekʰɨ* = *kʌnkaŋ* + *cetʰekʰɨ*

'the technique for being healthy' 'healthy' 'the investment technique'

b. *c'ampʰalacʰi/c'amc'amipʰalacʰi* = *c'amc'ami* + *pʰapʰalacʰi*

'a secret(illegal) promise watcher' 'a secret promise' 'a watcher (paparazzi)'

These examples show variation, and when it is more like a blend, the prosodic structure of the head is preserved like in *kʌntʰekʰɨ* or *c'ampʰalacʰi*, while the left source word is not truncated when the splinter of the right source word works as a morpheme or suffix, like in *kʌnkaŋtʰekʰɨ* or *c'amc'amipʰalacʰi*. It seems that if a certain word is used more and more, it becomes increasingly morpheme-like in its usage. With more widely-used forms, there is a tendency to combine the left source word with the form without truncation.. To put it differently, the difference between blends and combining forms could be captured with regards to the role of phonological factors in their formation. Preservation of the prosodic structure of the right source word, like in *kʌntʰekʰɨ* and *c'ampʰalacʰi*, may be evidence that such words were formed via a blending process. With forms like *kʌnkaŋtʰekʰɨ* or *c'amc'amipʰalacʰi* on the other hand, the lack of prosodic preservation may be evidence that the right side of the word was treated more like a morpheme, resulting in a combining form rather than undergoing a blending process. These examples show

that language change that first started as blending can later become a suffix.

5. Conclusions

The aim of this paper was to describe and analyze the general characteristics of Korean blends, particularly their phonological patterns, while showing that phonological factors play a crucial role in the formation of Korean blends. In this paper, I collected data for Korean blends, and argued that although some exceptions exist, Korean blends are in fact, very grammatical. I have shown that blends are created based on surface-to-surface correspondence between source words and the resultant blend, and this correspondence requires them to be as similar as possible. They have been analyzed as a process of Prosodic Morphology. Their templates vary according to the prosodic structure of the head. Specifically, I have adopted two sets of faithfulness constraints that are in conflict with each other: one requires prosodic faithfulness while the other requires segmental faithfulness.

Most characteristics of Korean blends have been explained via the interaction of these faithfulness constraints and other constraints. While Korean blends can be analyzed with the constraints used for blends of other languages, I have shown that Korean blends can be better explained under the framework of Harmonic Grammar in which constraints are weighted, not strictly ranked as in Optimality Theory. While most Korean blends show grammatical patterns, exceptional cases exist, and their

occurrence can be understood with the concept of recoverability.

This paper also raises possibilities for further studies. The nature of the overlapping of similar segments could be studied in more detail with phonetic approaches. For example, how similar do two segments must be in order to be considered an imperfect mapping (overlapping)? A study that aims to answer such a question would clarify the nature of blending as well as our perception of sound. Also, blending is part of a contiguous category of other word-formation strategies, such as clipping, affixation, or combining forms (López Rúa 2004). In other words, if a certain word is used recurrently in blending, it becomes increasingly like a morpheme, which is called a combining form, and later works as a suffix. Further research of combining forms is necessary for a more complete understanding of blending. Phonology plays a role in each of the word-formation strategies, and the study of the surrounding categories would clarify the understanding of blending and the nature of word formation in general. While I have focused on Korean blends, previous studies on blends in other languages show the possibility of universal patterns for blending, which means that the analysis I have proposed for Korean blends could be extended to analyze the blending of other languages. The study on blending in many languages, including Korean, which was not considered a linguistically governed process in the past, would deepen the understanding of our knowledge of word-formation.

While I have focused on the phonology of blending in this paper, there are other interesting aspects of blending. In fact, blending also could be studied from the perspectives of other linguistic subfields such as semantics, sociolinguistics, and historical linguistics. More accurate understanding of blending would be possible

when all these factors are considered, and the phenomenon of blending can provide evidence for the investigation of our knowledge of language, especially what strategies are used when new words are formed.

Appendix: the list of Korean blends

If further information is needed, please email me at suzy47@snu.ac.kr.

Blend	Source Word 1	Source Word 2
akʰaŋsɨ	atʰɨ	pakʰaŋsɨ
akpʰɨl	ak	lipʰɨl
aktʰicɨn	ak	nɛtʰicɨn
alɨhento	alɨhentʰina	ihjʌnto
anatʰeinʌ	anaunsʌ	entʰʌtʰeinʌ
anatʰʌl	anallokɨ	ticitʰʌl
antʰicɨn	antʰi	nɛtʰicɨn
apʰatʰel/ apʰasɨtʰel	apʰatʰɨ	opʰisitʰel
apʰatʰopʰia	apʰatʰɨ	jutʰopʰia
apʰatʰotʰel	apʰatʰɨ	hotʰel
atʰicɨn	acumma	nɛtʰicɨn
auttʰɨlo	auttoʌ	metʰɨlo
c’ampʰalacʰi/c’amc’amipʰalacʰi	c’amc’ami	pʰapʰalacʰi
c’iktʰiŋ	c’ikta	mitʰiŋ
c’ileki	c’icili	s’ɨleki
c’olcaŋmjʌn	c’olmjʌn	c’acaŋjʌn
c’olpok’i	c’olmjʌn	t’ʌkpok’i
c’ʌnmojaŋcʰʌ	c’ʌn	hjʌnmojaŋcʰʌ
cahapʌksɨ	cahjʌn	sɨtʰapʌksɨ
caitʰamin	caitʰun	pitʰamin
calsɛŋp’ɨta	calsɛŋkita	ip’ɨta
campʰociʌm	cam	simpʰociʌm
capʰalacʰi	capʰanaki	pʰapʰalacʰi

cʰakjepu	cʰa	kakjepu
cʰalali	cʰali	cʰalalo
cʰamineitʰʌ	cʰatui	tʰʌmineitʰʌ
cʰapatʰa	cʰatui	apatʰa
cʰapʰalacʰi	cʰa	pʰapʰalacʰi
cʰapot	cʰatui	lopot
cʰatʰekʰɨ	cʰa	cɛtʰekʰɨ
cʰɛktʰiŋ	cʰɛk	mitʰiŋ
cʰetʰekʰɨ	cʰe	cɛtʰekʰɨ
cʰɛtʰɨlmɛn	cʰɛtʰiŋ	centʰɨlmɛn
cʰiktʰoŋljʌŋ	cʰikʰin	tɛtʰoŋljʌŋ
cʰinɨnim	cʰikʰin	hanɨnim
cʰokɨlliŋ	cʰotɨŋhaksɛŋ	cʌkɨlliŋ
cʰuktʌkhu	cʰukku	otʌkhu
cʰutalɨkʰɨ	cʰumiɛ	cantalɨkʰɨ
cʰʌŋnaltu	icʰʌŋjoŋ	honaltu
cʰwicip	cʰwicik	sicip
cihajʌn	ciha	cahajʌn
cilɨkasɨm	cilɨta	olɨkasɨm
cimsɨŋtol	cimsɨŋ	aitol
cipʰalacʰi	cihacʰʌl	pʰapʰalacʰi
coltʰiŋ	colʌp	mitʰiŋ
culumapɨl	cu	pulumapɨl
cummalella	acumma	sintelella
cupʰalacʰi	cusik	pʰapʰalacʰi
cʌmpɨlella	cʌmpo	ʌmpɨlella
cʌnpʰalacʰi	cʌn	pʰapʰalacʰi
cʌnsaŋto/kjʌŋlato	cʌnlato	kjʌŋsaʌto

cʌŋtʰiŋ	cʌnlʌe	mitʰiŋ
cʌsʼitʰeinʌ	acʌsʼi	entʰʌtheinʌ
ɛcaŋkɨm	ɛ	tɛcaŋkɨm
ɛktʰicɨn	ɛksjʌn	sitʰicɨn
ellepal	elci	sʌllepal
elopiannaitʰɨ	elosɨ	alapiannaitʰɨ
elpʰalacʰi	elpʰicɨn	pʰapʰalacʰi
eltʰiŋ	ellipeitʰʌ	mitʰiŋ
emtʰicɨn	mobileinternet	nɛtʰicɨn
ɛptʰicɨn	ɛp	nɛtʰicɨn
eptɨŋi	epʰɨl	koptɨŋi
ɛwantol	ɛwan	aitol
haksuksa	hakkjo	kisuksa
haktelia	hakkwan	lottelia
halpa	hannalaataŋ	alpa
helsɨlopik	helsɨ	eʌlopik
hjutʰekʰɨ	hjusik	cɛtʰekʰɨ
homkʰaŋsɨ	hom	pakʰaŋsɨ
hompʰʌni	hom	kʰʌmpʰʌ ni
homsjulaŋsɨ	hom	asjulaŋsɨ
honɨnim	honaltu	hanɨnim
hontʰekʰɨ	kjʌlhon	cɛtʰekʰɨ
hoŋali	hoŋpo	toŋali
hwantʰekʰɨ	hwan	cɛtʰekʰɨ
hwaŋsanɨŋ	hwaŋsan	paŋsanɨŋ
ɨnɨnim	ɨsa	hanɨnim
inpʰoumi	inpʰomeisjʌn	toumi

ipc^{h}o	iptampɛ	jʌpc^{h}o
ɨp^{h}alac^{h}i	ɨljo	p^{h}ap^{h}alac^{h}i
it^{h}icɨn	i	nɛt^{h}icɨn
jakiŋ	ja	cokiŋ
jaŋp^{h}alac^{h}i	jaŋ	p^{h}ap^{h}alac^{h}i
japsɨt^{h}ʌ	jappi	lapsɨt^{h}ʌ
jat^{h}iŋ	jawe	mit^{h}iŋ
jenɨŋtol	jenɨŋ	aitol
jokonecɨ	jokulɨt^{h}ɨ	majonecɨ
jokt^{h}icɨn	jok	nɛt^{h}icɨn
jop^{h}alac^{h}i	joli	p^{h}ap^{h}alac^{h}i
jukpaŋpu	jukkun	kukpaŋpu
jup^{h}isɨcok	jupik^{h}wʌt^{h}ʌsɨ	op^{h}isɨcok
jup^{h}ot^{h}ʌ	jupik^{h}wʌt^{h}ʌsɨ	lip^{h}ot^{h}ʌ
jut^{h}ek^{h}ɨ	ju	cɛt^{h}ek^{h}ɨ
jut^{h}icɨn	jupik^{h}wʌt^{h}ʌsɨ	nɛt^{h}icɨn
jʌmk^{h}ijuc^{h}ʌn	jʌmkihun	mikk^{h}ijuc^{h}ʌn
jʌnaltu	jʌminci	honaldu
jʌnkal	jʌnki	nɛŋkal
jʌnkitol	jʌnki	aitol
jʌnnɨnim	kimjʌna	hanɨnim
jʌŋlokpa	sinjʌŋlok	tɨlokpa
jʌŋp^{h}alac^{h}i	jʌŋhwa	p^{h}ap^{h}alac^{h}i
jʌpkicɨn/jʌpt^{h}icɨn	jʌpki	nɛt^{h}icɨn
jʌpkɨleitɨ	jʌp	ʌpkɨleitɨ
jʌt^{h}icɨn	jʌ	nɛt^{h}icɨn
k’otcumma	k’ot	acumma
k’ʌlk’ɨmkʌlita	k’ʌlk’ɨlʌpta	t’ɨk’ɨmkʌlita

kalicinal	kac’a	olicinal
kalkjʌpsal	kalpi	samkjʌpsal
kancit^{h}em	kanci	ait^{h}em
kaŋnjaŋi	kaŋaci	kojaŋi
kaŋtalp^{h}ɨ	kaŋkikap	kantalp^{h}ɨ
kɛc’aŋi	kɛmi	pec’aŋi
kɛcʌncep^{h}um	kɛ	kacʌncep^{h}um
kɛhanminkuk	kɛ	tɛhanminkuk
keimp^{h}ia	keim	jut^{h}op^{h}ia
kɛkɨtol	kɛkɨ	aitol
kɛkɨunsʌ	kɛkɨmɛn	anaunsʌ
kemp^{h}alac^{h}i	keimmʌni	p^{h}ap^{h}alac^{h}i
kempis’i	keim	empis’i
kemt^{h}icɨn	keimmʌni	nɛt^{h}icɨn
kɛnjaŋi	kɛ	kojaŋi
kɛsali	kɛka	husali
kɛtɨlip	kɛ	ɛtɨlip
k^{h}ak^{h}et^{h}iŋ	k^{h}a	mak^{h}et^{h}iŋ
k^{h}akjepu	k^{h}atɨ	kakjepu
k^{h}alataisɨ	k^{h}ala	p^{h}alataisɨ
k^{h}alcepi	kalkuksu	sucepi
k^{h}ap^{h}epɨlʌli	k^{h}ap^{h}e	laipɨlʌi
k^{h}ap^{h}et^{h}olaŋ	k^{h}ap^{h}e	lesɨt^{h}olaŋ
k^{h}asɨpci	k^{h}aset^{h}ɨ	haksɨpci
k^{h}at^{h}ek^{h}ɨ	k^{h}amela	cɛt^{h}ek^{h}ɨ
k^{h}ɛjonecɨ	k^{h}ɛc^{h}ap	majonecɨ
k^{h}ɛlop^{h}ɨl	k^{h}ɛlot	ɛp^{h}ɨl
k^{h}ɛntilella	k^{h}ɛnti	sintelella

kʰɛpʰisɨluk	kʰɛcuʌl	opʰisɨluk
kʰɛpʰocʰi	kʰɛcuʌl	sɨpʰocʰi
kʰɛtʰicɨn	pɨlotɨkʰɛsɨtʰɨ	nɛtʰicɨn
kʰɨllatɨ	kʰɨllɛsik	pallatɨ
kʰipoto	kʰipotɨ	to
kʰitɨtʰeinʌ	kʰitɨ	entʰʌtʰeinʌ
kʰokʰakʰocu	kʰokʰakʰolla	socu
kʰolientʰitɨ	kʰolia	olientʰitɨ
kʰoliutɨ	kʰolia	halliutɨ
kʰollikʌn	kʰolian	hullikʌn
kʰolʌŋtʰaŋ	kʰo	sʌllʌŋtʰaŋ
kʰomelikʰa	kʰolia	amelikʰa
kʰoŋkɨlliswi	kʰolian	iŋkɨlliswi
kʰopʰisɨcok	kʰʌpʰi	opʰisɨcok
kʰoposɨ	kʰolian	poposɨ
kʰopusim	kʰokɛl	capusim
kʰoʌlliʌtaptʰʌ	kʰolian	ʌlliʌtaptʰʌ
kʰʌmpʰʌtemi	kʰʌmpʰʌni	akʰatemi
kʰʌmsiin	kʰʌmpʰjutʰʌ	wʌnsiin
kʰʌmtʰiŋ	kʰʌmpʰjutʰʌ	mitʰiŋ
kʰʌnɔʌpʌkʰitɨ	kʰʌnɔʌpʌtʰipɨ	kʰitɨ
kʰʌnpʌtɛnsɨ	kʰʌnpʌɔʌnsɨ	tɛnsɨ
kʰwʌpusim	kʰwʌtʰʌcapʰan	capusim
kilɨn cit	kil	silɨn cit
kɨlmok	kɨl	kilmok
kimcʰipol	kimcʰi	sjupʰʌpol
kimcʰiutɨ	kimcʰi	halliutɨ

kɨmc^{h}u	kɨm	pɛc^{h}u
kɨmkjʌpsal	kɨm	samkjʌpsal
kɨmp^{h}ia	kɨmjuŋkamtokwon	map^{h}ia
kɨmt^{h}ʌn	kɨm	int^{h}ʌn
kip^{h}ɨt^{h}ik^{h}on	kip^{h}ɨt^{h}ɨ	imot^{h}ik^{h}on
kjec^{h}ʌncʌl	kje	kɛc^{h}ʌncʌl
kjelal	kjelan	talkjal
kocet^{h}ɨ	kojʌŋmin	kacet^{h}ɨ
koŋpɨlli	koŋhjojin	lʌpɨlli
koŋt^{h}ek^{h}ɨ	koŋkan	cɛt^{h}ek^{h}ɨ
kot^{h}oksɨ	kocup^{h}a	pot^{h}oksɨ
kulatɨ	kula	celatɨ
kuntɛlia	kuntɛ	lottɛlia
kuntɛsɨlika	kuntɛ	puntesɨlika
kunt^{h}oŋljʌŋ	kuntɛ	tɛt^{h}oŋljʌŋ
kʌlp^{h}ʌ	kʌl	kolp^{h}ʌ
kʌlʌŋi	kʌci	pilʌŋi
kʌlʌŋpɛŋi	kʌci	pilʌŋpɛŋi
kʌmpulʌki	kʌmpul	pusɨlʌki
kʌnt^{h}ak^{h}u	kʌntam	ot^{h}ak^{h}u
kʌnt^{h}ek^{h}ɨ/ kʌnkaŋt^{h}ek^{h}ɨ	kʌnkaŋ	cɛt^{h}ek^{h}ɨ
kwap^{h}alac^{h}i	kwawe	p^{h}ap^{h}alac^{h}i
lacepi	lamjʌn	sucepi
lait^{h}icɨn	lait^{h}ɨ	nɛt^{h}icɨn
lap^{h}jut^{h}ʌ	latio	k^{h}ʌmp^{h}jut^{h}ʌ
lapok’i	lamjʌn	t’ʌkpok’i
lecʌnsʌl	lecʌntɨ	cʌnsʌl

lekʰaŋsɨ	lepʰocʰɨ	pakʰaŋsɨ
lesɨtʰopʰia	lesɨtʰolaŋ	jutʰopʰia
leʌtʰem	leʌ	aitʰem
likwon	litɨm	tʰɛkwon
lopʰocʰɨ	lomɛntʰik	sɨpʰocʰɨ
lot’opʰɛllisɨ	lot’o	tʰawʌpʰɛllisɨ
lotʰicɨn	lot’o	nɛtʰicɨn
makʰeciŋ	makʰetʰiŋ	pʰɛkʰiciŋ
makkʰol	makkʌlli	alkkʰol
malahuna	malatona	nahuna
malpʌkci	mal	hʌpʌkci
maltʰɨ laitʌ	mal	kʰatʰɨ laitʌ
maltʰiŋ	mal	cʰɛtʰiŋ
matkʰaŋsɨ	mat	pakʰaŋsɨ
matʌntʰɨ	matʌ	sɨtʰjutʌntʰɨ
mellontʰain	mellon	pallentʰain
mɛmicella	mɛmi	pupucella
menɨnim	mesi	hanɨnim
mɛnsjumʌ	mɛn	kʰʌnsjumʌ
mesia	mesi	mesia
mesin	mesi	sin
mɛsɨtʰici	mɛsɨ	pʰilisɨtʰici
mɛsusellona	mɛsu	palɨsellona
metʰikʰet	meikʰɨʌp	etʰikʰet
mintʰel	minpak	hotʰel
misilella	misi	sintelella
mjupʰela/ocikʰʌl	mjucikʰʌl	opʰela
mjusikmentʰʌli	mjusik	takʰjumentʰʌli

mjut^{h}ic$\imath$n	mjusik	nɛt^{h}ic$\imath$n
mjʌŋp^{h}alac^{h}i	mjʌŋham	p^{h}ap^{h}alac^{h}i
molk^{h}apait^{h}$\imath$`	molk^{h}a	al$\imath$pait^{h}$\imath$`
mot^{h}ik^{h}et	mopail	et^{h}ik^{h}et
mot^{h}ʌlʌns$\imath$	mot^{h}ʌsaik^{h}$\imath$l	ɛmpjullʌns$\imath$
muc^{h}u	mu	pɛc^{h}u
muk’ʌpul	mu	s’aŋk’ʌpul
mumotol	mumo	aitol
mun$\imath$nim	chwɛmuwon	han$\imath$nim
munwet^{h}ic$\imath$n	munwe	nɛt^{h}ic$\imath$n
mupent^{h}us$\imath$	mus$\imath$ŋpu	jupent^{h}us$\imath$
mup^{h}$\imath$l	mu	lip^{h}$\imath$l
mupik^{h}ʌl	mupik^{h}ʌl	mucik^{h}ʌl
mupiok^{h}e	mupi	kalaok^{h}e
musip^{h}ʌ	cʌnhjʌnmu	lusip^{h}ʌ
mʌkp^{h}iŋ	mʌkta	k^{h}ɛmp^{h}iŋ
mʌlt^{h}ic$\imath$n	mʌlt^{h}imitiʌ	sit^{h}ic$\imath$n
mʌp^{h}ia	mother	map^{h}ia
mwʌc’ʌlako	mwʌ	ʌc’ʌlako
nakc^{h}ʌŋca	nakta	sic^{h}ʌŋca
nalhokcanakhata	nalhoja	canakcanakhata
namc^{h}intol	namc^{h}in	aitol
nek^{h}asic$\imath$m	nɛt^{h}ic$\imath$n	mek^{h}asic$\imath$m
neksop$\imath$llian	neks$\imath$t^{h}$\imath$	nop$\imath$llian
nɛŋc^{h}aŋko	nɛŋcaŋko	c^{h}aŋko
nes$\imath$t^{h}oliʌn	nɛt^{h}ic$\imath$n	his$\imath$t^{h}oliʌn
net^{h}ikʌn	nɛt^{h}ic$\imath$n	hullikʌn

netkʰama	netʰɨwʌkʰɨ	okʰama
netmɛŋ	intʰʌnet	munmɛŋ
netnape	netʰɨwʌkʰɨ	onape
netpʰai	netʰɨwʌkʰɨ	sɨpʰai
netpʰotʰʌ	nɛtʰicɨn	lipʰotʰʌ
netsim	netʰɨwʌkʰɨ	insim
nɨtkʰaŋsɨ	nɨtta	pakʰaŋsɨ
nokʰaŋsɨ	no	pakʰaŋsɨ
noŋpʰalacʰi	noŋʌp	pʰapʰalacʰi
nopʰalacʰi	nolɛpaŋ	pʰapʰalacʰi
nopʰia	no	mapʰia
notʰekʰɨ	no	cɛtʰekʰɨ
notʰicɨn	noin	netʰicɨn
nuekɨla	nue	piakɨla
omleki	omnia	s'ɨleki
onku	onlain	cʰinku
oseiton	osehun	pʰoseiton
p'olokpa	p'olok	tɨlokpa
p'alp'uli	p'aipʰɨ	maup'uli
p'jʌkɨmɛn	p'jʌ	kɛkɨmɛn
p'jʌpʌkci	p'jʌ	hʌpʌkci
p'otʰoŋljʌŋ	p'ololo	tɛtʰoŋljʌŋ
p'ujoil	p'ulikipʰɨnnamu	sujoil/mokjoil
p'ʌŋkɨllɛntɨ	p'ʌŋcʰukku	iŋkɨllɛntɨ
paktʰancu	pakkʰasɨ	poktʰancu
pallencʰikʰin	pallentʰain	cʰikʰin
paltʰekʰɨ	pal	cɛtʰekʰɨ

pamtʰʌti	pam	sɨtʰʌti
pankjetʰaŋ	pan	samkjetʰaŋ
pansusɛŋ	pan	cɛsusɛŋ
pantʰoŋljʌŋ	panc’ok	tɛtʰoŋljʌŋ
paŋtʰiŋ	paŋ	mitʰiŋ
paptʰʌti	pap	sɨtʰʌti
pɛlenalut	pɛ	kulenalu
pepʰɨl	pesɨtʰɨ	lipʰɨl
pɛsɨlacʰi	pɛu	pjʌsɨlacʰi
pɛtʰɨlpot	pɛtʰɨl	lopot
pʰampʰalacʰi	pʰamasi	pʰapʰalacʰi
pʰeisɨpʰek	pʰeisɨ	sɨpʰek
pʰesɨtʰiŋ	pʰesɨtʰipal	mitʰiŋ
pʰettʰikʰet	pʰet	etʰikʰet
pʰicatʰolaŋ	pʰica	lesɨtʰolaŋ
pʰɨlenti	pʰɨlentɨ	tɛti
pʰɨlotʰeci	pʰɨlosentʰo	pʰʌsentʰeci
pʰjopʰalacʰi	pʰjo	pʰapʰalacʰi
pʰokʰalak/pʰokalak	pʰokʰɨ	sutkalak
pʰonpʰalacʰi	pʰon	pʰapʰalacʰi
pʰontʰicɨn	pʰon	nɛtʰicɨn
pʰontʰiŋ	pʰon	mitʰiŋ
pʰʌm pʰɨl	pʰʌm	lipʰɨl
pʰʌmjunikʰeisjʌn	pʰʌm	kʰʌmjunikʰeisjʌn
pʰʌmlokɨ	pʰʌm	pɨllokɨ
pʰʌn pʰicɨn	pʰʌpʰi	nɛtʰicɨn
pʰʌnpʰiŋ	pʰʌn	sjopʰiŋ

pʰʌntjulaŋsɨ	pʰʌntɨ	asjulaŋsɨ
pʰʌnʌlisɨtʰɨ	pʰʌntimɛnicʌ	ɛnʌllsɨtʰɨ
picatʰɨ	picɨnisɨ	atʰɨ
picotʰɨ	picɨnisɨ	licotʰɨ
pillatʰɨ	pilla	apʰatʰɨ
pilmwihata	pil	malmwihata
pimanse	piman	pijonse
pinema	pitio	sinema
pinɨnim	pi	hanɨnim
pittʰekʰɨ	pit	cɛtʰekʰɨ
pjusiksjo	pju	mjusiksjo
pjʌkticʰi	pjʌk	piticʰi
pjʌncʌpkwan	pjʌnkisu	mjʌncʌpkwan
pjʌŋcʰʌŋca	pjʌŋmat	sicʰʌŋca
polʌ	poko	tʌlʌ
poŋpʰilpʌkɨ	poŋcunho	sɨpʰilpʌkɨ
poŋtʰana	poŋcuŋkɨn	santʰana
popʰalacʰi	pocokɨm	pʰapʰalacʰi
potʰiŋ	potʰɨ	mitʰiŋ
pucʰilʌpta	puk’ɨlʌpta	p’acʰilʌpta
pupʰalacʰi	pucokɨm	pʰapʰalacʰi
putʰiŋ	pulusɨ	mitʰiŋ
pʌlpʰocʰɨ	pʌl	pʰolpʰocʰɨ
pʌntʰiŋ	pʌnkɛ	mitʰiŋ
pʌtʰollik	pʌptɛ	kʰatʰollik
s’alpʰalacʰi	s’al	pʰapʰalacʰi
s’amcʰu	s’am	pɛcʰu

s’ankjʌpsal	s’an	samkjʌpsal
s’ɨpʰalacʰi	s’ɨleki	pʰapʰalacʰi
s’ʌkkallita	s’ʌkita	hetkallita
s’ʌntʰiŋ	s’ʌn	kʰotʰiŋ
saikʰom	saikʰo	sitʰɨkʰom
saipaŋkalɨtɨ	saipʌ	apaŋkalɨtɨ
sakitʌwei	saki	pʰeitʌwei
salɨpaitʰɨ	saipʌ	alɨpaitʰɨ
samcʌkhwa	samsʌŋ	chwecʌkhwa
samtitasɨ	sam	atitasɨ
sankik’un	san	sakik’un
santʰakkʰɨllosɨ	tak	santʰakʰɨllosɨ
sɛk’ʌpta	sɛkʰomhata	t’ik’ʌpta
sɛktʰicɨn	seksɨ	nɛtʰicɨn
sɛktʰicɨn	sɛk	nɛtʰicɨn
sɛllʌtʌntʰɨ	sɛllʌlimɛn	sɨtʰjutʌntʰɨ
sepʰia	se	mapʰia
setʰekʰɨ	se	cɛtʰekʰɨ
sɨkʰikʰet	sɨkʰi	etʰikʰet
sɨkʰinʌtʰɨ	sɨkʰi	taiʌtʰɨ
sikpʰalacʰi	sik	pʰapʰalacʰi
sɨllami	sɨllo	s’ɨnami
silpʰalacʰi	silʌp	pʰapʰalacʰi
sɨmasjumʌ	sɨmatʰɨ	kʰʌnsjumʌ
sɨmatʰiŋ	sɨmatʰɨpʰon	mitʰiŋ
sɨmatʰun	sɨmatʰɨ	kʰatʰun
sinpʰalacʰi	sinmun	pʰapʰalacʰi

sɨpʰosjumʌ	sɨpʰocʰɨ	kʰʌnsjumʌ
sɨtʰailtʰeinʌ	sɨtʰail	entʰʌtʰeinʌ
sitʰekʰɨ	si	cɛtʰekʰɨ
sjatʰekʰɨ	sjanel	cɛtʰekʰɨ
sjopkʰaŋsɨcok	sjopʰiŋ	pakʰaŋsɨcok
sjupʰalacʰi	sjupʰʌmakʰet	pʰapʰalacʰi
sjuttʰʌliŋ	sjut	sentʰʌliŋ
sollolletʰalia	sollo	pʰɨlolletʰalia
sonpʰuŋki	son	sʌnpʰuŋki
sosjʌl liʌ	sosjʌl	hotʰelliʌ
sosjʌltʰeinʌ	sosjʌl	entʰʌtʰeinʌ
suntɛlella	suntɛ	sintelella
sʌllipʌ	sʌlli	kʌllipʌ
sʌnalhata	sʌnɨlhata	sanalhata
sʌnllentʰain	sʌl	pallentʰain
sʌnpʰalacʰi	sʌnkʌ	pʰapʰalacʰi
sʌnpʰɨl	sʌn	lipʰɨl
sʌŋpʰalacʰi	sʌŋ	pʰapʰalacʰi
sʌsuapi	sʌtoŋuk	hʌsuapi
t’aŋpʰalacʰi	t’aŋ	pʰapʰalacʰi
t’aŋtʰekʰɨ	t’aŋ	cɛtʰekʰɨ
t’aŋtʰiŋ	t’aŋ	mitʰiŋ
t’ɨmtak	t’ɨmpoki	mutak
t’ʌkcʰal	t’ʌkkap	kʌmcʰal
takʰjucikʰʌl	takʰjumentʰʌli	mjucikʰʌl
taksekwon	tak	jʌksekwon
taktulki	tak	pitulki

tamp^{h}alac^{h}i	tampɛ	p^{h}ap^{h}alac^{h}i
tanomi	tamunhwa	anomi
tɛnk^{h}ʌsɨ	tɛnsɨ	sʌk^{h}ʌsɨ
tɛp^{h}alac^{h}i	tɛsʌn	p^{h}ap^{h}alac^{h}i
tɛtp^{h}alac^{h}i	tɛtkɨl	p^{h}ap^{h}alac^{h}i
t^{h}akkʌlli	t^{h}akcu	makkʌlli
t^{h}akpɛki	t^{h}akcu	makpɛki
t^{h}allakt^{h}ik^{h}o	t^{h}allak	kallakt^{h}ik^{h}o
t^{h}ek^{h}oleit^{h}ʌ	t^{h}ek^{h}ɨ	tek^{h}oleit^{h}ʌ
t^{h}ɛk^{h}oliʌn	t^{h}ɛkwʌnto	k^{h}oliʌn
t^{h}ɛkɨlliswi	t^{h}ɛkwʌnto	iŋkɨlliswi
t^{h}ɛksukca	t^{h}ɛksi	nosukca
t^{h}ɛkwʌnlopik	t^{h}ɛkwʌnto	eʌlopik
t^{h}ellelɨki	t^{h}ellepicʌn	allelɨki
t^{h}ellepiannait^{h}ɨ	t^{h}ellepicʌn	alapiannait^{h}ɨ
t^{h}ellp^{h}esʌ	t^{h}ellʌnt^{h}ɨ	p^{h}ɨlop^{h}esʌ
t^{h}ellʌnsʌ	t^{h}ellʌnt^{h}ɨ	anaunsʌ
t^{h}ic^{h}ʌtʌnt^{h}ɨ	t^{h}ic^{h}ʌ	sɨt^{h}jutʌnt^{h}ɨ
t^{h}ɨlɛntʌnt^{h}ɨ	t^{h}ɨlɛnsɨ	sɨt^{h}jutʌnt^{h}ɨ
t^{h}ɨlputa	t^{h}ɨllita	talputa
t^{h}ɨp^{h}alac^{h}i	t^{h}ɨlɛntɨ	p^{h}ap^{h}alac^{h}i
t^{h}oŋp^{h}ɨlsɨt^{h}ei	t^{h}oŋil	t^{h}emp^{h}ɨlsɨt^{h}ei
t^{h}op^{h}ɨleso	t^{h}ap	esɨp^{h}ɨleso
tiak^{h}oinonia	tiak^{h}onia	k^{h}oinonia
tɨlamak^{h}ʌl	tɨlama	mjucik^{h}ʌl
tɨlat^{h}un	tɨlama	k^{h}at^{h}un
tip^{h}at^{h}el	ticit^{h}ʌl	ap^{h}at^{h}el

tolpiʌc^{h}ʌnka	isetol	joŋiʌc^{h}ʌnka
tonɛt^{h}icɨn	toneisjʌn	nɛt^{h}icɨn
tonsi	ton	c^{h}elsi
twɛlaŋi	twɛci	holaŋi
twɛtulki	twɛci	pitulki
twikucʌŋtoŋ	twi	apkucʌŋtoŋ
ult^{h}ollik	sʌultɛ	k^{h}at^{h}ollik
utp^{h}ɨta	utkita	sɨlp^{h}ɨta
ʌlliʌtakt^{h}ʌ	tak	ʌlliʌtapt^{h}ʌ
ʌmp’a	ʌmma	ap’a
ʌŋatol	ʌŋa	aitol
ʌt^{h}ek^{h}ɨ	ʌ	cɛt^{h}ek^{h}ɨ
waip^{h}ɨlokʌ	waip^{h}ɨ	pɨllokʌ
weppʌcok	wep	silpʌcok
wepsicok	wep	misicok

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국문초록

한국어 혼성어의 제약기반 분석

본 논문은 한국어 혼성어의 음운론적 요소들을 기술하고 분석함으로써 혼성어를 만드는데 작용하는 원리와 제약을 밝히는 것을 목표로 한다. 과거에는 혼성어를 특별한 규칙성을 가지지 않는 현상으로 보는 경우가 많았지만, 최근의 다양한 언어의 혼성어 연구들은 혼성어 또한 체계적이고 규칙적인 조어법임을 보여준다. 본 연구에서는 한국어 또한 매우 규칙적인 조어법이며, 나아가 기존의 다른 언어의 혼성어 연구에서 다루지 않았던 혼성어 유형들도 일반적인 유형들과 함께 제약 기반 분석을 통해 설명될 수 있음을 보인다.

본고에서는 이를 위해 크게 한국어 혼성어의 기술과 분석, 두 가지 작업이 이루어진다. 첫째로, 한국어 혼성어 자료를 기존 논문, 신어 사전, 인터넷, 텔레비전 등 다양한 방법을 통해 모으고 이를 바탕으로 정밀한 음운론적 기술을 한다. 일반적으로, 한국어 혼성어는 '잠+심포지엄=잠포지엄'과 같이 두 단어 중 한 단어의 길이를 유지하고, 앞부분은 다른 단어의 일부를 넣는 형태를 보인다. 이 길이를 따르지 않을 경우는 '도네이션+네티즌=도네티즌'과 같이 둘 사이에 겹치는 부분 (overlap)이 있어 분절음을 더 많이 살릴 수 있는 경우가 대부분이다. 둘째로, 한국어

혼성어가 운율형태론을 통해 분석될 수 있으며, 기존의 영어, 스페인어, 히브리어 등 다른 언어의 혼성어 분석에서 이루어졌던 최적성 이론의 제약들을 바탕으로 한국어 또한 이 제약들을 통해 분석될 수 있음을 보인다. 혼성어는 두 단어와 혼성어 사이의 대응 관계가 중요한데, 한국어 혼성어는 한 단어의 운율 체계 (음절 개수)에 대한 충실성 제약과 두 단어의 분절음에 대한 충실성 제약, 즉 두 충실성 제약 사이의 경쟁으로 설명할 수 있다. 일반적인 경우 운율 체계에 대한 충실성 제약이 두 단어의 분절음에 대한 충실성 제약보다 우세하다.

그러나 최적성 이론의 제약들 간의 엄격한 위계가 한국어 혼성어의 설명에는 한계가 있음을 밝힌다. 이 엄격한 위계는 '도네이션+네티즌=도네티즌'과 같이 분절음에 대한 충실성 제약이 운율 체계에 대한 충실성 제약보다 우세한 경우, '태권도+코리언=태코리언'의 /ㄱ/과 /ㅋ/ 같이 비슷한 분절음 또한 겹치는 부분 (overlap)이 되는 경우 등을 설명하지 못한다. 따라서, 제약들에게 엄격한 위계 대신 각각 점수(weight)를 주는 모델인 하모닉 그래머(Harmonic Grammar)가 한국어 혼성어 분석에 더 적절할 수 있음을 보여준다.

Keyword: 혼성어, 최적성 이론, 하모닉 그래머, 운율형태론

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